COMMONWEALTH of VIRGINIA

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March 20, 2015

VIA ELECTRONIC MAIL
Mr. Jay Stewart
Environmental Manager
Radford Army Ammunition Plant
4050 Pepper's Ferry Road
Radford, Virginia 24141

Re: Radford Army Ammunition Plant, Radford, VA
EPA ID No. VA1210020730, Second Round Notice of Deficiency Addressing the Part B Permit Application for the Renewal of the Hazardous Waste Subpart O Explosive Waste Incinerator Permit

Dear Mr. Stewart:

The Virginia Department of Environmental Quality, Office of Waste Permitting and Compliance (DEQ) has completed the review of the *Radford Army Arsenal Plant's (RAAP) Incinerator Permit Application NOD Response (NOD Response)* document, dated March 5, 2015. The NOD Response document was sent in response to the *First Round Notice of Deficiency Addressing the Part B Permit Application for the Renewal of the Hazardous Waste Subpart O Explosive Waste Incinerator Permit* (First Round NOD), dated October 7, 2014 delivered via electronic mail to RAAP. The NOD Response document incorporates revisions to the informal response received from RAAP via electronic mail on December, 11 2014, which were discussed in meetings with the DEQ and RAAP on December 9 and 10, 2014 and a conference call on January 22, 2015. In accordance with the Virginia Hazardous Waste Management Regulations as codified in Title 9 of the Virginia Administrative Code, Agency 20, Chapter 60 (9 VAC 20-60), this letter constitutes the DEQ's second completeness/technical review of the Subpart O Explosive Waste Incinerator Part B Permit application.

Based on the review of the NOD Response the DEQ has determined that the majority of the comments raised in the First Round NOD have been resolved. However, there are still issues with the permit application which will need to be resolved before the application can be declared administratively and technically complete, with the most notable outstanding issue being determining the applicability of the Military Munitions Rule (MMR) for the proposed transfer of explosive waste from the New River Unit (NRU) for thermal treatment in the Explosive Waste Incinerator. The DEQ is proposing that a conference call be held with RAAP to discuss the MMR applicability to the NRU.

The comments are divided into two sections and incorporate both the formal and informal responses, which are dated and numbered accordingly, to the First Round NOD sent by RAAP as well as DEQ's response. The first section deals with general deficiencies of the application itself, i.e., information which was not submitted by RAAP so it could not be reviewed for technical completeness. The second section of comments deals with specific parts of RAAP's Part B permit application which are not considered technically complete. Please review the comments and submit the requested response on a comment by comment basis within 30 days of your receipt of this letter (March 20, 2015). The comments may be discussed and resolved informally as well. If more time is needed, please contact me at the email address or phone number listed below prior to the expiration of the 30 day deadline.

Please submit the responses to the DEQ in the form of one hard copy and a CD in PDF format (or electronically attached to an e-mail) and a CD in Microsoft WORD format (or electronically attached to an e-mail), and submit the responses to the EPA and the DEQ's Blue Ridge Regional Office in the CD PDF format. Please be advised that the DEQ requires all sections of the application to be in an electronic format, including drawings. The DEQ does not have the capability to copy large drawings, i.e., anything over 11 inches by 17 inches. If you should have any questions regarding these matters or would like to schedule a meeting or teleconference to discuss them further, please contact me at (804) 698-4467 or by e-mail at Ashby.Scott@deq.virginia.gov.

Sincerely,

Mr. Ashby Scott
Title V Coordinator
Office of Waste Permitting and Compliance

Attachments:

Notice of Deficiency – Second Round Notice of Deficiency Addressing the Part B Permit Application for the Renewal of the Subpart O Explosive Waste Incinerator Permit

cc: Andrea Barbieri, EPA, Region III (3LC50)
Aziz Farahmand, DEQ, Blue Ridge Regional Office
Sonal Iyer, DEQ, CO
Leslie Romanchik, DEQ, CO
Hasan Keceli, DEQ, CO
Jutta Schneider, DEQ, CO
Kurt Kochan, DEQ, CO
Julia King–Collins, DEQ
Central Hazardous Waste Files

Section One of the Second Round Notice of Deficiency Addressing the Part B Permit Application for the Renewal of the Subpart O Explosive Waste Incinerator Permit, General Application Deficiencies:

1. Please submit a revised Risk Assessment per the attached document entitled "Virginia Department of Environmental Quality - Hazardous Waste, Part B, Combustion Facility, RCRA, Permit Renewals - Requirements for Revised Risk Assessments Section 1. Risk Assessment Revision – Risk Inputs Requirements".

   Radford Response (1-1), (Response received on 12/11/2014) – We would like to review this request with DEQ and discuss what modifications to the existing risk assessment are anticipated

   DEQ Response (1-1) – DEQ has communicated and provided guidance on the revised risk assessment to be performed. If RAAP is still confused as to what the DEQ expects they may contact the risk assessor assigned to support the permitting action for clarification.

   Radford Response (1-2), (Response received on 3/6/2015) – RFAAP does not believe that new emissions sampling is necessary, as no changes have been made to the waste groups incinerated and no changes have been made to the incinerator design. RFAAP believes that new air modeling may be warranted given the availability of new weather data adjacent to the facility.

   DEQ agreed on performing new air modeling. They expressed two concerns regarding stack testing: 1) emissions analyses were not conducted by a VELAP lab (as VELAP did not exist at the time), and 2) improved detection limits could result in the inclusion of compounds that were previously excluded because they were non-detect.

   RFAAP added that despite the lack of a VELAP accreditation program, analyses were held to a strict QA/QC program as specified by the USEPA methods that were used and therefore represents valid data. The data was also reviewed, approved, and deemed valid by DEQ for use with both the RCRA compliance demonstration and the risk assessment at the time it was collected.

   On the issue of detection limits, RFAAP indicated that little data is available to compare because risk-assessment like testing is generally not being performed anymore. However, RFAAP will compare detection limits in the risk burn for dioxins/furans and metals to those achieved in the latest Comprehensive Performance Test (CPT). DEQ will review this issue with the Department of Laboratory Services and will provide a final decision on the need for stack testing before the protocol is developed. RFAAP will provide a comparison between detection limits from the risk burn to those from the latest CPT. RFAAP will prepare a risk assessment protocol for DEQ's review once final direction is provided on stack testing requirements.

DEQ Response (1-2) – DEQ has determined that RAAP may use the data from the previous risk burn for the current permit for use in the revised risk assessment to be submitted. If RAAP wishes to use CPT data, as it has indicated in its response, the data will be evaluated by the same standards for RCRA risk burn data to determine if the CPT data is sufficient for use in the risk assessment. Regardless, the previous risk burn data and/or CPT data may only be used provided the following conditions are met, otherwise another risk burn will have to be performed:

1) The data are in compliance with current data quality standards established by EPA methods for use in a hazardous waste permitting risk assessment. This includes evaluating the current detection limits for constituents against the previous risk burn to make sure the risk burn numbers are below the detection limits values. If data from the CPT are to be used the data must include all of the constituents evaluated for the previous Risk Burn in order to be considered sufficient for use in the revised risk assessment.

2) No modifications have been made to the incinerator since the last RCRA permit issuance.

3) No modifications have been made to the process in which the waste groups are generated which changes the chemical composition of the permitted waste streams being fed to the incinerator for treatment.

2. Please submit a revision to Attachment II.B, which includes a description of the traffic pattern on-site, including estimated volume, traffic control, signs, signals and procedures, adequacy of access roadway surfaces, and load-bearing capacity for expected traffic on-site. No such language was included in RAAP's Part B renewal application.

   Radford Response (1-1), (Response received on 12/11/2014) - We will include the requested description in the modified submittal.

   DEQ Response (1-1) – This action will satisfy the comment.

   Radford Response (1-2), (Response received on 3/6/2015) - No current traffic diagram was available for the site. RFAAP is creating one. The map will be centered around the incinerator area. It will not be a traffic map for the entire RFAAP property. DEQ agreed that this was acceptable. RFAAP to create the traffic map and submit it for DEQ review.

   DEQ Response (1-2) – This action will satisfy the comment once the revised traffic map has been submitted.

3. Please submit a revision to Attachment III.1.C which includes a written assessment, which is reviewed and certified by an independent Virginia registered professional engineer, on the structural integrity and suitability of the slurry tank system, including the catch tank, for handling hazardous waste. At a minimum, the assessment must consider the following:

   (1) Design standard(s), if available according to which the tank and ancillary equipment were constructed;

(2) Hazardous characteristics of the wastes that have been and will be handled;

(3) Existing corrosion protection measures

(4) Documented age of the tank system, if available (otherwise, an estimate of the age), along with the manufacturers expected service life of the tanks; and

(5) Results of a leak test, internal inspection, or other tank integrity examination.

(6) A recommended frequency of inspections based on the professional engineer's assessment of the slurry and catch tank systems.

Radford Response (1-1) , (Response received on 12/11/2014) - Think this is only required once. However, we cannot locate prior assessment. Have received quote from qualified firm for inspection. Pending DEQ's approval of this inspection will proceed. Review inspection proposal with DEQ to determine if they think that assessment meets the requirements.

DEQ Response (1-1) – Under RCRA permitting regulations renewal permit for operating sources are treated as if the source is applying for an initial permit. Thus all the requirements for a permit application are applicable regardless of if the facility already has an issued permit. The inspection of the tanks will be required every permit renewal term and if performed by a qualified firm which addresses each item in the comment that will satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP has been unable to locate the prior assessment and is scheduling a new assessment to be performed. Discussions were had on the need for future assessments (are these required once per Permit term, etc.?) Under process safety management (PSM), the tanks will likely be inspected every three years.

RFAAP will complete an initial inspection for the permit application and will repeat this inspection every three years in conjunction with the PSM inspections.

DEQ Response (1-2) – This action will satisfy the comment once the revised assessment of the tank system has been submitted.

4. Please submit a revision to Attachment II.F which outlines the procedure by which RAAP will submit a petition for an extension for closure time as no such language was included in RAAP's submitted Part B renewal application.

Radford Response (1-1) ,(Response received on 12/11/2014) - The requirements for requesting an extension to the time required to complete closure are clearly and specifically detailed in 40 CFR § 264.113(b). We do not feel it appropriate to incorporate the wording from this requirement directly into our closure plan or permit, as regulations are subject to change at any time. If DEQ wishes to address these extension provisions in the Permit, we simply request they add a reference to the regulatory citation in Module II.

DEQ Response (1-1) – RAAP may submit a class 1 permit modification to address any potential future changes of the applicable regulatory citations included in the permit. RAAP will include the requested language in the revised permit application or the DEQ will retain the boilerplate language for the module.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over including direct regulatory language in the Permit as opposed to simple regulatory references. (This makes the Permit a static document rather than one that evolves with regulatory changes). DEQ feels that the Permit should be static, reflecting the status of the regulations at the time of issuance. RFAAP will modify the closure plan to include the requested language.

DEQ Response (1-2) – This action will satisfy the comment once the revised application has been submitted with the required language.

5. Please submit a revision to Attachment II.F which addresses secondary containment crack sampling.

   Radford Response (1-1), (Response received on 12/11/2014) - The requested information is already included in the Closure Plan. Please reference Section II.F.5c of the plan on Page II.F-24, which includes discussions on sampling of cracks or gaps in the secondary containment system. Sealing of these cracks or gaps prior to decontamination activities is also discussed in Section II.F.5b of the Closure Plan.

   DEQ Response (1-1) – The information identified in RAAP's response satisfies the comment made.

   Radford Response (1-2), (Response received on 3/6/2015) – RFAAP directed DEQ to the language provided under Section II.F.5c of the plan on Page II.F-24. DEQ concurred that this language is sufficient.

   DEQ Response (1-2) – This comment is considered satisfied.

6. Please submit a revision to Attachment II.F which incorporates the boilerplate closure risk assessment language which is as follows:

*"**Closure Risk Assessment:***

In the event the facility is not able to demonstrate closure of any part of the facility is accordance with the closure standards listed in this plan, the facility will engage the Virginia DEQ to determine the appropriateness of, and procedures for, demonstrating closure in accordance with a risk assessment approach (including the submission and approval of any necessary permit closure plan modifications).

Risk Assessment Protocol:

In accordance with the VHWMR and the RCRA, 40 CFR Part 264, Subpart G, the Permittee will close the hazardous waste management units (HWMU) in compliance with 40 CFR Part 264, Subpart G, § 264.111 Closure Performance Standards. Compliance with the closure performance standards will be demonstrated in accordance with the decontamination standards for the HWMUs as above or in accordance with the risk based standards specified below.

The concentrations of the closure constituents in the compliance samples shall be at levels that meet the acceptable risk-based performance standards using the appropriate risk-based assessment criteria and standards specified below:

Risk Assessment Standards and Criteria:

Clean Closure may be demonstrated by a risk-based assessment as an alternative to the non-detection decontamination standard or the statistical comparison of compliance samples to background levels. The facility may demonstrate that the concentrations of hazardous constituents detected and remaining in the hazardous waste management unit, equipment, structures, soils and sub-soils do not pose an unacceptable level of risk to human health and the environment.

If a risk assessment is performed to determine compliance with the closure standards, the risk assessment criteria shall comply with one or more of the following DEQ guidance documents and other DEQ risk-based guidance, as applicable:

1. *Guidance for Development of Health Based Cleanup Goals Using Decision Tree/Risk Exposure and Analysis Modeling System (REAMS) Program, 1994, and Risk Based Methodology, as amended by the DEQ. Modeling shall also include fate transport modeling with SESOIL as a preferred model.*

2. *DEQ Guidelines for Developing Health-based Cleanup Goals Using Risk-based Assessment at a Hazardous Waste Site Facility for Restricted Industrial Use, June 1995.*

3. *DEQ's Draft Guidance Manual for Closure Plans and Post Closure Plans for Hazardous Waste Management Facilities, dated September 28, 2001.*

In accordance with the DEQ closure guidance, if the site cannot be closed for residential use, then the option to pursue restricted closure (commercial/industrial) may also be exercised."

Radford Response (1-1), (Response received on 12/11/2014) - The proposed language in the application seems to accomplish the same goal as the suggested language additions requested by DEQ. However, it leaves open the opportunity for DEQ and RFAAP to perform the assessment of risk via the most up-to-date models available at the time of closure.

DEQ Response (1-1) – RAAP will submit a revised permit language with the boilerplate language as given in the comment. RAAP's permit language should be sufficient to close the facility as if it were going to close as is today and not some later date in the future so both parties have a clear understanding of the order of operations and expectations for closure of the facility.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over including direct regulatory language in the Permit as opposed to simple regulatory references. (This makes the Permit a static document rather than one that evolves with regulatory changes). DEQ feels that the Permit should be static, reflecting the status of the regulations at the time of issuance. RFAAP will modify the closure plan to include the requested language.

DEQ Response (1-2) - This action will satisfy the comment once the revised application has been submitted with the required language.

7. Please note that Module I - Standard Conditions, of the Part B permit is boilerplate language applicable to all RCRA applicable Part B permitted facilities and no revisions to the language will be considered for RAAP's Part B permit renewal.

Radford Response (1-1), (Response received on 12/11/2014) - We agree that the wordsmithing changes and leaving them as written will have no material impact. However, there are several other changes that can have a significant impact on either the interpretation or implementation of the provision and request DEQ's further consideration of these changes. Specifically:

- Adding regulatory citations removes ambiguity with compliance requirements

- Adding language to allow site-specific sampling methods is necessary as our streams require unique handling.

DEQ Response (1-1) – The permittee may submit additional language which is site specific to the facility with their revised permit application but may not remove any of the language currently in the boilerplate conditions. All site specific language will be clearly marked as such in the revised application and will be evaluated by the DEQ for technical adequacy.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over missing regulatory citations and site-specific considerations. Specifically,

- Adding regulatory citations removes ambiguity with compliance requirements

- Adding language to allow site-specific sampling methods is necessary as our streams require unique handling.

DEQ understands these concerns and recommended that a section be added to the end of Module I that adds the non-boilerplate information.

RFAAP will prepare a modified Module I that contains a list of regulatory references at the end of the boiler plate section, as well as any other clarifications they feel are necessary.

DEQ Response (1-2) - This action will satisfy the comment once the revised application has been submitted with the required language.

8. The submitted permit application has removed the phrase "stored and treated" and replaced it with "managed" in various parts of the application. The language should not be changed to reflect the proper regulatory term for the permitted activity.

   Radford Response (1-1), (Response received on 12/11/2014) - In general, this should be okay. However, we need to review to make sure that none of the changes were made to correct erroneous descriptions.

   DEQ Response (1-1) – The DEQ will evaluate the revised application language to determine if it satisfies the comment made.

   Radford Response (1-2), (Response received on 3/6/2015) – In general, RFAAP understands this comment. However, we need to review each instance to make sure that none of the changes were made to correct erroneous descriptions.

   RFAAP will review all changes to see if any require further discussion. Pending none, then RFAAP is okay with implementation.

   DEQ Response (1-2) – As stated in the previous response, the DEQ will evaluate the revised application language to determine if it satisfies the comment made.

9. There are various references to ATK in the permit. While ATK was the contractor who submitted the application at the time the references need to be changed to the current operating contactor, BAE, in the revised version of the permit application.

   Radford Response (1-1), (Response received on 12/11/2014) - We will review and remove all additional references.

   DEQ Response (1-1) – This will satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP will review the permit application and remove any remaining references to ATK. RFAAP will make these revisions. DEQ will provide notation of any specific instances they found.

DEQ Response (1-2) – This will satisfy the comment. DEQ has identified the following instances in the submitted permit language in which ATK is referenced:

1) Module II, Attachment II.D, Page II.D.2, Line 4

2) Module II, Attachment II.H, Section II.H.2 , Page II.H-1, Demonstration of Compliance, Line 11

3) Module II, Attachment II.H, Section II.H.5 , Page II.H-4, Flood Plan for the Permitted Storage and Treatment Area, Line 2

4) Module III, Attachment III.1.C, Section III.C.2.c , Page III.C-1, Scope, Line 2

5) Module III.2, Attachment III.2.A, Page III.2.A-1, Line 32

10. The phrase "Standard Operating Procedure (SOP)" and any supplemental documents which reference the SOP in the submitted permit application have been removed. The references to the SOP and associated attachments or appendices shall be included in the revised permit application.

Radford Response (1-1), (Response received on 12/11/2014) - There is no requirement that we could locate within Part 270 or Part 264 to require the inclusion of standard operating procedures. There are requirements to include descriptions of procedures, but no requirements to include the procedures themselves. We believe we have provided adequate descriptions when and where they are required within the Permit. If there is a portion of the Permit that does not provide adequate description, we request DEQ provide direction to that portion of the Permit and the regulatory citation for the required description so that we can modify our submittal as appropriate.

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. After discussion with the facility the DEQ will accept copies of the current SOP with the revised permit application for review but not inclusion into the permit document itself as long as the SOPs are deemed adequate by the DEQ.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP believes that inclusion of the SOPs in the Permit either by attachment or reference unnecessarily increases the compliance burden. (Significant discussion over SOP steps that do not relate to environmental compliance and making them RCRA requirements by inclusion in the Permit). Export control and confidentiality requirements were also discussed at length. In further discussions concerning rules and regulations addressing confidential business information and International Traffic in Arms Regulations (ITAR), RFAAP expressed concern over DEQ management and compliance with the ITAR requirements. (Anything that is subject to ITAR has to be protected from non-US citizen review, etc.).

In light of these considerations and discussions on how the SOPS were used (or rather not used) to ensure environmental compliance, DEQ concurred that their inclusion in the permit either by reference or actual inclusion was not necessary. (This is further supported 40 CFR Part 264 and 270, which do not require inclusion of the SOPs). SOPs should be maintained onsite for inspection and review; however, no references to them need to be included in the Permit.

DEQ Response (1-2) – This will satisfy the comment.

11. There are no examples of daily logs or inspection forms contained in Attachment C for the Inspection Schedules. The revised permit application shall include these items.

    Radford Response (1-1), (Response received on 12/11/2014) – 40 CFR § 270.14(b)(5) requires that a copy of the inspection schedule be included in the application. The general requirements for this inspection schedule are discussed in 40 CFR § 264.15…the schedule "must identify the types of problems which are to be looked for during the inspection." Nothing within this section or 40 CFR § 270.14(b)(5) requires submittal of actual inspection checklists. The inspection schedule included in Attachment II.C, specifically in Table II.C-1 and II.C-2 provides the required level of detail specified in the regulation. The items that are inspected are identified, the types of problems that are evaluated are specified, and the frequency of inspection is noted.

    DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. After discussion with the facility the DEQ will accept copies of the current inspection checklists with the revised permit application for review but not inclusion into the permit document itself as long as the inspection checklists are deemed adequate by the DEQ

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP believes that inclusion of the daily logs or inspection sheets in the Permit unnecessarily increases the compliance burden. As neither 40 CFR Part 264 or 270 require inclusion of the actual inspection forms, RFAAP believes that descriptions of the forms and checklists should be appropriate.

DEQ concurred that the logs and checklists themselves do not need to be included but a description of the inspection schedule should be. DEQ clarified that by not including the checklists, RFAAP is assuming the burden of ensuring that their checklists match the inspection schedule provided in the Permit.

RFAAP will provide examples of their current checklists for DEQ to compare to the inspection schedule. In the future, if any significant changes are made to an inspection sheet, RFAAP will provide an example to DEQ to confirm that it covers all required information. However, all parties agreed that neither these example checklists nor direct references to form numbers, etc., will be included in the Permit.

DEQ Response (1-2) – The submission of the checklists for review with the revised permit application, but not to be included in the final permit document, will satisfy the comment. Language stating that any changes to the checklists will require RAAP to submit the revised version of the checklists to DEQ for review and that current versions of the checklists will be maintained on-site for review by DEQ personnel upon request shall be included in the revised permit application.

Section Two of the Second Round Notice of Deficiency Addressing the Part B Permit Application for the Renewal of the Subpart O Explosive Waste Incinerator Permit, Specific Application Deficiencies:

1. **Module II, Section I.2, Page II-4, Operating Record**, The citation for section iv should be updated from 40 CFR 264.56(j) to 40 CFR 264.56(i) to reflect the current citation in the CFR.

   Radford Response (1-1), (Response received on 12/11/2014) - We will correct the citation as noted.

   DEQ Response (1-1) – This will satisfy the comment.

   Radford Response (1-2), (Response received on 3/6/2015) – The citation will be corrected.

   DEQ Response (1-2) – This will satisfy the comment.

2. **Module II, Section I.2, Page II-5, Operating Record**, The following language from relabeled section II.2.b, which was struck out of the submitted permit application, is standard language and shall be included in the revised permit application:

"i. Facility operation and maintenance records and reports prepared pursuant to this Permit; and"

Radford Response (1-1), (Response received on 12/11/2014) - This language was inadvertently moved from the five-year record retention section to the three-year record retention section. DEQ is correct that pursuant to 40 CFR § 264.347, monitoring and inspection data from hazardous waste incinerators must be kept for five years. Correct this in the next submittal.

DEQ Response (1-1) – This action will satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – The language in question was inadvertently moved from the five-year retention section during the markup of the Permit. RFAAP will return the language in question to the five-year retention section.

DEQ Response (1-2) – This action will satisfy the comment.

3. **Module II, Section I.2, Page II-7, Operating Record**, The following language from relabeled section II.2.d, which was struck out of the submitted permit application, is standard language and shall be included in the revised permit application:

"vii. For all new and converted "new" tank systems, pursuant to 40 CFR264.192:

A. An assessment, by an independent, registered professional engineer or independent qualified tank installation inspector not affiliated with the tank vendor, certified by an independent, registered professional engineer, that the tank system was installed properly and that all discrepancies have been repaired;

B. Results of tightness testing and integrity assessments; and

C. For all tanks which require corrosion protection, a written statement from a corrosion expert that attests to the proper design and installation of any corrosion protection measures."

Radford Response (1-1), (Response received on 12/11/2014) – The RFAAP incinerator complex does not have any new tanks subject to these requirements. Therefore, inclusion of this provision in the Permit is inappropriate and misleading. The addition of any new tanks to the permit would require a significant permit modification. Should this occur, the appropriate language regarding new tanks can be added at that time.

DEQ Response (1-1) – While RAAP's objection is noted by the DEQ the language referenced in the comment made is boilerplate language which is standard for all RCRA Part B permits and will be included in the facility's revised permit application. RAAP will include the requested language in the revised permit application or the DEQ will retain the boilerplate language for the module.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP contends that this information is not appropriate as they have no new tanks at the facility. The requested language should be added if and when RFAAP submits a Permit modification request to add new tanks.

DEQ indicated that the language has to be included in the Permit, as it is boilerplate language and standard in all VDEQ permits. RFAAP to add the requested language to the permit application.

DEQ Response (1-2) – This action will satisfy the comment.

4. **Attachment II.A, Section A.2, Page II.A-2, Facility**, The following language in the first paragraph of the section describing the facility location was struck out of the submitted permit language and should be included in the revised submission:

   "The RFAAP is located approximately 5 miles northeast of the city of Radford, 10 miles west of Blacksburg, and 47 miles southwest of Roanoke."

   Radford Response (1-1), (Response received on 12/11/2014) - We removed this information from the permit, as it is not specifically required to satisfy the facility location provision of 40 CFR § 270(b)(11) or the topographic map requirements of 40 CFR § 270(b)(19). Furthermore, considering the continuously growing extents of our surrounding community, any such information could easily become inaccurate and outdated.

   DEQ Response (1-1) – The language struck out of the permit is important for the permitting authority, DEQ, to understand the distance from the emissions source to potential human receptors which will affect the risk assessment values used to determine permit limits. While it is understood and expected that population demographics will change over time this information is important to ensure that the permit limits developed are the most protective of human health and the environment.

   Radford Response (1-2), (Response received on 3/6/2015) – RFAAP does not believe this specific level of detail is necessary to satisfy the facility location provision of 40 CFR § 270(b)(11) but noted that this information is shown on the topographic maps included to satisfy 40 CFR § 270(b)(19). Furthermore, considering the continuously growing extents of our surrounding community, any such information could easily become inaccurate and outdated.

   DEQ contends that this information is appropriate to describe the physical location of the facility to nearby communities. The topographic map location data is not sufficient. RFAAP will add an updated version of this text to the application.

   DEQ Response (1-2) – This action will satisfy the comment.

5. **Attachment II.A, Section A.2, Page II.A-2, Permitted Treatment and Storage Area**, Control Houses, units 431 and 447 have been removed from the list of specifically included buildings in the permitted treatment and storage areas and listed instead on the excluded list of buildings. Has the building been demolished or somehow removed from the process of incinerating waste? Otherwise conditions applicable to the Control Houses, units 431 and 447, will remain in the permit language as is.

   Radford Response (1-1), (Response received on 12/11/2014) - Building 431 is the old incinerator control room. The building is used as a storage shed to store miscellaneous equipment and supplies. It is not part of the incineration process. Building 447 is the current incinerator control room. While the process is operated from this location, no actual hazardous waste management occurs within this building. These buildings were never included in the process of incinerating waste. Therefore, we did not feel their inclusion within the "permitted" units to be appropriate.

   DEQ Response (1-1) – Upon discussion with the facility during the 12/9 and 12/10 site visit meetings Building 431 will be allowed to be removed from the list of included buildings. Building 447 will remain as it is part of the current incinerator operation.

   Radford Response (1-2), (Response received on 3/6/2015) – RFAAP clarified that Building 431 is the old incinerator control room. The building is used as a storage shed to store miscellaneous equipment and supplies. It is not part of the incineration process. Building 447 is the current incinerator control room.

   After discussion, DEQ concurred that Building 431 could be removed from the description. Building 447 should remain. RFAAP will modify the text to include Building 447 and exclude building 431.

   DEQ Response (1-2) – This action will satisfy the comment.

6. **Attachment II.A, Section A.2, Page II.A-2, Permitted Treatment and Storage Area**, The proposed language by the permittee should be changed to add "and the applicable RCRA requirements." as follows:

   "*Incinerators 440 and 441 (identified as Accounts 440 and 441), where the slurried wastes are treated in accordance with this Permit and the requirements of the Hazardous Waste Combustor National Emission Standards for Hazardous Air Pollutants and the applicable RCRA requirements."*

   Radford Response (1-1), (Response received on 12/11/2014) - The Permit serves to reference the applicable RCRA requirements. Therefore, inclusion of reference to "RCRA" requirements is misleading and seems to indicate that there are elements of RCRA compliance for these units not covered by this Permit.

DEQ Response (1-1) – The permittee is responsible for complying with all applicable federal and state regulations regardless of their inclusion in a permit document, an example from an air permit would be compliance with a NESHAP standard which has yet to be included in the facility's Title V permit. Any "fog" of the compliance burden does not preclude the facility from knowing what regulations they are subject to and complying with those applicable requirements. The language will be included in the revised permit application.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over including a general reference to a broad regulatory requirement instead of specific citations of regulatory requirements (and the ambiguity that could create in the duty to comply).

DEQ explained that the Permit is not inclusive of all RCRA requirements and despite the broad nature of the reference, RFAAP is obligated to fulfill all requirements, regardless of whether they are specifically detailed in the Permit. RFAAP will add the requested language.

DEQ Response (1-2) – This action will satisfy the comment.

7. **Attachment II.A, Section A.2, Pages II.A-1, II.A.2, Permitted Treatment and Storage Area**, The language in the permit does not describe the processes involved in the generation of hazardous waste and only describes the grinder building and incinerator operations. The declaration of waste composition and amount/rate to be treated, hazardous waste listing/characteristics, and potential impact on the hazardous waste multi-pathway risk assessment are required for the proposed New River Unit (NRU) and tenant organizations which are served by the incinerator.

   Radford Response (1-1), (Response received on 12/11/2014) - At the RFAAP, the basic emphasis is propellant manufacture. After the final products are manufactured, these materials are shipped to clients or stored within the contiguous RFAAP or the New River Unit. The NRU, while not part of the contiguous property, is considered part of the RFAAP facility.

   Occasionally, the propellants are stored for many years if not required for military action. All propellants have stabilizer compounds. The stored propellants are tested to determine the rate of stabilizer depletion. Once the stabilizer reaches a certain minimum requirement, then the propellant is transferred to a waste inventory and destroyed. The material from the NRU is no different than that material stored on the contiguous property and is essentially part of the same stockpile.
   The tenants that use the manufacturing facilities to make propellants are making similar propellants described above which are easy to classify into the Waste Analysis Plan. The waste generated by the tenants represents only a fraction of the material burned at the EWI and/or OBG and is generated in the same manner from making the propellant as described above. Because these wastes are generated at the RFAAP and never leave the RFAAP, they have always been considered onsite wastes. Additionally, these wastes have been classified

according to BAE's waste groupings and are mixed with and integrated into the BAE streams that feed the incinerator.

DEQ Response (1-1) – Per our earlier discussion with RAAP the DEQ has made RAAP aware that the NRU is not considered the same facility as RAAP and will require a separate permitting action if the NRU wishes to be able to store hazardous wastes for greater than 90 days. RAAP's response regarding the generation process and tenant wastes shall be included in the revised permit application language to satisfy the comment made.

Radford Response (1-2a), (Response received on 3/6/2015, New River Unit applicability for Military Munitions Rule) – RFAAP explained that management of these materials falls under the military munitions rule (MMR). Specifically, RFAAP contends that under the MMR, the material is not a waste until it is removed from storage with the intent to destroy. Specific reference was provided to both regulatory language and preamble language.

DEQ disagrees with this interpretation and believes that the materials should be handled as off-site waste and their management at the RFAAP constitutes the management of off-site wastes.

DEQ will review the MMR in further detail and approach RFAAP for further discussion once they have completed this review.

RFAAP will also review the applicability and implementation of MMR at RFAAP and other U.S. Army installations with their command group and legal counsel prior to this discussion.

DEQ Response (1-2a) – The DEQ has completed the review of the Military Munitions Rule applicability for RAAP and has the following questions for RAAP:

1) Do the wastes from the NRU meet the definition of military munitions in 40 CFR 260.10?

2) How long have waste munitions been received for treatment by RAAP from the NRU? Has the NRU been in existence before the effective date of the Military Munitions Rule and was notice given to DEQ that RAAP would be receiving waste munitions from the NRU for treatment?

3) Has a closure plan for the NRU been developed as required by 40 CFR 264.1202 and 265.1202?

4) When is the formal declaration by a military official of the munitions being a solid waste made in 40 CFR 266.202(b)(4)? Whom is making this decision and what records are being kept by RAAP of the waste munitions declarations and transfers?

5) In previous discussions RAAP has indicated that they do not believe a waste manifest for the transfer of waste munitions RAAP from to the NRU is not needed. Since the NRU and RAAP facilities are not contiguous and transported on public roads the DEQ asserts that a manifest is required. Please provide a regulatory justification for why the waste munitions are not being manifested.

6) RAAP's permit currently does not allow acceptance of off-site waste for treatment in the incinerators. While there is language to allow the acceptance of off-site wastes from the NRU in the current version of the permit application that language has not been formalized and is not applicable. Please provide a regulatory justification for the acceptance of the wastes.

7) Is the NRU designed and operated to meet the standards specified in 40 CFR 264.1201 and 265.1201? Please provide information which confirms that the NRU is currently in compliance with the standards.

Radford Response (1-2b), (Response received on 3/6/2015, Tenant Wastes) – RFAAP explained that the tenant waste issue was handled during the last Permit modification. DEQ was not looking at that version of the Permit when reviewing the permit application, as it was made after the application was submitted. In light of this, RFAAP does not believe any further information is necessary to facilitate tenant waste.

Note on required notifications. Per the referenced Class 1 permit modification in August 2012, RFAAP must notify DEQ when they intend to incinerate tenant wastes. All existing tenant wastes at the time of the modification were henceforth approved. After August 2012, any new tenant wastes must be approved on a case by case basis prior to incinerating them for the first time. (Note this modification applies only to wastes that can be classified into one of the existing waste groups in RFAAP's permit. Any wastes that do not meet this classification would require a permit modification before they could be incinerated).

DEQ will modify the Permit language to be consistent with the latest modification (and allow tenant waste management), changing the language from:

"Only wastes generated at RFAAP by the permittees may be stored or treated at the permitted treatment and storage areas"

to

"Only wastes generated at RFAAP may be stored or treated at the permitted treatment and storage areas."

DEQ Response (1-2a) – This will satisfy the part of the comment dealing with tenant waste being accepted for treatment at the incinerator on a case by case basis.

8. **Attachment II.A, Section A.3, Page II.A-3, Auer Land Use Analysis –** The submitted language has removed references to the Auer Land Use Analysis. As the Auer Land Use Analysis enables determination of use for rural and urban land use dispersion coefficients for use in the multi-pathway risk analysis, the permittee shall submit revised language which incorporates the Auer Land Use Analysis as well as any associated tables which were removed from Attachment II.A.

   Radford Response (1-1), (Response received on 12/11/2014) - Determination of rural or urban characteristics is necessary for the air modeling conducted for the risk assessment and is discussed in detail within both the protocol and report for that assessment. This information will be reevaluated for any new risk assessment and will be included in the protocol and report for that assessment. Both of these documents will be incorporated to the Permit by reference.

   40 CFR § 270(b)(19) does require that the application provide a topographic map depicting "the surrounding land uses (residential, commercial, agricultural, and recreational)". This is satisfied with the description in Section II.A.3 and in Figure II.A-4. Further classification using a specific technique (*e.g.*, Auer land use analysis) is not required or appropriate.

   DEQ Response (1-1) – If the facility feels the Auer land use analysis is not the most protective of human health and the environment as an input into the revised risk assessment they may submit an alternative analysis method which will be reviewed by the DEQ for technical adequacy. That method will then be referenced in the revised permit application in place of the Auer Land Use Analysis. If however the facility does not propose another specific analysis method the method previously used and determined to be protective of human health and the environment, in this instance the Auer Land Use Analysis, will be performed and included in the permit language.

   Radford Response (1-2), (Response received on 3/6/2015) – RFAAP does not believe that this type of analysis (or level of detail) is necessary to satisfy the requirements of 40 CFR § 270(b)(19). DEQ concurs that a specific Auer land use analysis is not required but contends that a textual description of land use is required.

   RFAAP will add a discussion to the permit application that provides a textual description of the information displayed in Figure II.A-4.

   DEQ Response (1-2) – DEQ will evaluate the language RAAP submits with their revised permit application to determine if the proposed language is an adequate substitution for the Auer land analysis. If the language is deemed adequate the comment will be satisfied.

9. **Attachment II.A, Figure II.A-2, Topographic Map,** The submitted topographic map of the facility does not include a wind rose and is at a scale of 1 inch = 2000 ft which is not in accordance with the standard for 1 inch to not exceed 200 ft on the submitted maps.

Radford Response(1-1), (Response received on 12/11/2014) - Figure II.A-2 is intended to provide a "zoomed out" view of the facility, showing it in relation to the surrounding area and larger topographic features. Figure II.A-3 provides the topographic data at the required scale - noted on the drawing as 1-inch equals 133 feet (as printed). We will add the wind rose to both maps as requested.

DEQ Response (1-1) – RAAP is allowed to submit maps which do not meet the regulatory standard for scale for informational purposes as long as additional maps at the required scale are submitted with the application. Since maps at the required scale have been submitted once revised maps with a wind rose are submitted they will satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP provided explanation for the maps that were provided and concurred that a wind rose was absent from the map as indicated. RFAAP will add a wind rose to the topographic map.

DEQ Response (1-2) – This action will satisfy the comment.

10. **Attachment II.A, Figures II.A-3 and II.A-4, Area Map and Land Use Map,** The area map, Figure II.A-3 is mislabeled on the page preceding the maps section in Module II.A as a topographic map and should be relabeled. Neither of the figures contains a wind rose and Figure II.A-4 is at a scale of 1 inch = 2000 ft which is not in accordance with the standard for 1 inch to not exceed 200 ft for submitted maps.

    Radford Response (1-1), (Response received on 12/11/2014) - Figure II.A-3 does provide topographic contours for the permitted area at a more detailed scale than Figure II.A-2. Therefore, referring to is as a topographic map is appropriate. The intent of this map is to provide a more zoomed in reference to the topographic features in the area than are provided on the wider topographic map, the purpose of which is to relate the facility to the surrounding area and larger topographic features. As noted above, this map provides this data at a scale of one inch equals 133 feet. A wind rose will be added as requested. Figure II.A-4 provides a "zoomed out" view of the surrounding land use.

    DEQ Response (1-1) – As noted in the response to the previous comment the facility may submit as many informational maps as they deem appropriate as long as the information is reflected in a properly scaled map or series of maps which are also submitted with the application. Relabeling the map to reflect this will satisfy the comment.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP provided explanation for the maps that were provided and concurred that a wind rose was absent from the map as indicated. RFAAP will add a wind rose to the topographic map.

    DEQ Response (1-2) – This action will satisfy the comment.

11. **Attachment II.A, Figures II.A-5, FEMA 100 Year Flood Zones,** The submitted map will need more sharply clarified boundaries of floodplain-100 yr and larger scale to show all permitted units on the included figure.

Radford Response (1-1), (Response received on 12/11/2014) - The floodplain boundaries provided are those specified by FEMA for the flood rate insurance map for the area. More "sharply" clarified boundaries for this data are not available.

DEQ Response (1-1) – While a sharper resolution map would be preferable if no such map exists than the DEQ will accept the currently submitted map as adequate to satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the floodplain boundaries provided are those specified by FEMA for the flood rate insurance map for the area. More "sharply" clarified boundaries for this data are not available. DEQ agreed this data was acceptable.

DEQ Response (1-2) – This action will satisfy the comment.

12. **Attachment II.B, Section II.B.1, Page II.B-1, Waste Characteristics**, RAAP has included language in the first paragraph of the waste characteristics section which mentions waste generated by tenant organizations at the facility and at the NRU which is described as being nearby. As stated previously in Comment 3, a declaration of waste composition and amount/rate to be treated, hazardous waste listing/characteristics, and potential impact on the hazardous waste multi-pathway risk assessment are required for the proposed NRU and tenant organizations which are served by the incinerator.

    Radford Response (1-1), (Response received on 12/11/2014) - At the RFAAP, the basic emphasis is propellant manufacture. After the final products are manufactured, these materials are shipped to clients or stored within the contiguous RFAAP or the New River Unit. The NRU, while not part of the contiguous property, is considered part of the RFAAP facility.

    Occasionally, the propellants are stored for many years if not required for military action. All propellants have stabilizer compounds. The stored propellants are tested to determine the rate of stabilizer depletion. Once the stabilizer reaches a certain minimum requirement, then the propellant is transferred to a waste inventory and destroyed. The material from the NRU is no different than that material stored on the contiguous property and is essentially part of the same stockpile.

    The tenants that use the manufacturing facilities to make propellants are making similar propellants described above which are easy to classify into the Waste Analysis Plan. The waste generated by the tenants represents only a fraction of the material burned at the EWI and/or OBG and is generated in the same manner from making the propellant as described above. Because these wastes are generated at the RFAAP and never leave the RFAAP, they have always been considered onsite wastes. Additionally, these wastes have been classified according to BAE's waste groupings and are mixed with and integrated into the BAE streams that feed the incinerator.

DEQ Response (1-1) – Per our earlier discussion with RAAP the DEQ has made RAAP aware the NRU is not considered the same facility as RAAP and will require a separate permitting action if the NRU wishes to be able to store hazardous wastes for greater than 90 days. RAAP's response regarding the generation process and tenant wastes shall be included in the revised permit application language to satisfy the comment made.

Radford Response (1-2), (Response received on 3/6/2015) – See prior discussions on NRU and tenants waste management provided with NOD 2.7.

DEQ Response (1-2) – The comment is satisfied in regards to tenant waste being treated in the incinerator but is unsatisfied for wastes from the NRU. The questions raised by DEQ detailed in the response to comment 7 of this section will need to be answered by RAAP.

13. **Attachment II.B, Section II.B.1, Page II.B-1, Waste Characteristics**, The submitted permit language in the second paragraph of the section should be revised to include the struck out language submitted by the permittee. The paragraph should read as follows:

"The managed wastes which are hazardous due to their ignitability (D001), or reactivity (D003), and/or toxicity for certain metals and organics. Only hazardous wastes, which are consistent with the requirements of the facility's RCRA Permit and this Waste Analysis Plan will be stored, treated, or incinerated. No wastes generated outside of RFAAP will be received, stored, or treated at the permitted treatment and storage areas. Only wastes generated at RFAAP by the Permittees may be stored or treated at the permitted treatment and storage areas."

Radford Response (1-1), (Response received on 12/11/2014) - The language requested for inclusion is included; however, it has been relocated to other sections of the document for clarity. The first sentence was retained where it was previously. The second sentence has been slightly reworked and included in the following paragraph. The two final sentences are inconsistent with the wording changes requested in the first paragraph. Therefore, they were struck from the section. (Please note that the changes requested in the first paragraph that pertain to NRU waste are similar to changes already requested and approved to the open burning ground permit and the EWI permit (through permit modifications submitted after this permit renewal application and prior to our receipt of comment from DEQ). These changes clarify that materials from the NRU, which is not included in the same contiguous property as the majority of the installation, are included in those wastes permitted for treatment.

DEQ Response (1-1) – DEQ concurs that the language changes requested were already addressed in the modification, dated April 16, 2012, allowing hazardous wastes from tenant organizations to be accepted following a notification procedure to the DEQ. However waste streams for the NRU were not included in the permit modification. Please include the modified language, including a WAP for the NRU wastes if they are to be included, in the revised permit application to be submitted.

Radford Response (1-2), (Response received on 3/6/2015) – See prior discussions on NRU and tenants waste management provided with NOD 2.7.

DEQ Response (1-2) – The comment is satisfied in regards to tenant waste being treated in the incinerator but is unsatisfied for wastes from the NRU. The questions raised by DEQ detailed in the response to comment 7 of this section will need to be answered by RAAP.

14. **Attachment II.B, Sections II.B.1, II.B.2, Pages II.B-1 through II.B-6, Waste Characteristics and Waste Composition and Characterization**, The submitted renewal permit application describes the waste streams to be handled by the incinerators; however the renewal application does not include any laboratory reports or Material Safety Data Sheets. The submitted language for Sections II.B.2 and II.B.2e should be revised to include the struck out language as well as the proposed language from RAAP.

    Radford Response (1-1), (Response received on 12/11/2014) - The information provided in Section II.B.2 and Table II.B-1 is sufficient to properly classify the wastes for RCRA. Given that no constituent feed rate limits for metals, chlorine, ash, etc., remain under the RCRA permit, no further characterization of the wastes should be required for management under this Permit. Note that most of the struck language in Section II.B.2 was duplicated elsewhere in this attachment or in Table II.B-1

    DEQ Response (1-1) – The information currently included is not sufficient to properly classify the waste, hence the referenced comment being made in the NOD. The current permit does not include any limits on throughput, or concentrations but this does not preclude limits for constituents being developed from a revised risk assessment which will be performed during the permitting process. The permittee will submit the requested information in a revised permit application or this comment will be included in a future Notice of Deficiency.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the information provided in Section II.B.2 and Table II.B-1 is sufficient to properly classify the wastes for RCRA. Given that no constituent feed rate limits for metals, chlorine, ash, etc., remain under the RCRA permit, no further characterization of the wastes should be required for management under this Permit.

    DEQ indicated that this information may be required depending on the results of the risk assessment. (For example, if feed rate limits are required for a constituent, information on that constituent will need to be included in the description).

    In discussion, RFAAP and DEQ agreed that the need for further detail should be tabled pending the results of the risk assessment.

    DEQ Response (1-2) – The comment will be addressed once the risk assessment has been completed and constituents of concern have been identified from the waste feed streams being treated.

15. **Attachment II.B, Section II.B.5, Page II.B-7, Waste and Residue Sampling,** The submitted permit language of the section should be revised to include the struck out language submitted by the permittee. The paragraph should read as follows:

    "BAE Systems, the permitted operator of the treatment and storage facilities, has prepared a waste sampling plan to help ensure collection of representative samples for analysis. The intent of the sampling plan is to provide representative data to maintain compliance with the state and federal solid and hazardous waste regulations. All sampling will be conducted in accordance with the facility's sampling and analysis plan and maintained as part of the Facility Operating Record. Two types of sampling are conducted to comply with this Permit: waste sampling and residue sampling. This section provides a description of the techniques employed for both."

    Radford Response (1-1), (Response received on 12/11/2014) - In reviewing DEQ's comment, we believe the reference should be to Section II.B.4. Assuming that is correct, the "sampling plan" referenced in the struck language (and in DEQ's suggested language) was never developed outside the context of the Permit or the standard operating procedures as a standalone document. Therefore, to remove a misleading reference to a plan that did not exist in standalone form, we struck the language. In lieu of developing a standalone plan, we have added language to this attachment to describe the sampling that is performed.

    DEQ Response (1-1) – This comment was addressed during the discussion with RAAP on 12/10 and a description of the sampling performed was deemed as adequate to address the comment. DEQ will review the submitted language in the revised permit application to determine if the proposed language from RAAP satisfies the comment.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the referenced "sampling plan" was never developed outside the context of the Permit or the standard operating procedures as a standalone document. Therefore, they removed the misleading reference and added language to describe the sampling that is performed. DEQ agreed that this was acceptable.

    DEQ Response (1-2) – This comment is satisfied with the new information provided by RAAP.

16. **Attachment II.B, Section II.B.5, Page II.B-8, Waste Analysis Requirements**, The renewal permit application does contain the analytical methods for waste component determination however there are no heat or viscosity values of the liquids provided in the application language. The revised application language shall include these values.

    Radford Response (1-1), (Response received on 12/11/2014) - There is no regulatory necessity for determining the heat or viscosity values of the liquids that are fed to the incinerators. These parameters are not necessary for determining the RCRA hazard classification of the waste, nor are they relevant for incineration of the wastes in accordance with this Permit. We recognize that these used to be required components of a trial burn plan under 40 CFR § 270.19(b). However, this plan is no longer required as the facility has

conducted its comprehensive performance test and submitted its notification of compliance under the Hazardous Waste Combustor (HWC) National Emissions Standards for Hazardous Air Pollutants (NESHAP).

DEQ Response (1-1) – After discussing the issue with RAAP the DEQ is convinced that the nature of the waste slurry and method of treatment by the incinerator does not require heat content or viscosity values to be included in the permit language. The comment is satisfied.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the parameters of higher heating value and viscosity are not appropriate indicators of combustion for the wastes that they incinerate. RFAAP's wastes are subautogenous in that they do not support their own combustion. All of the "heat" for the incineration operations is provided and maintained by the natural gas burners. The minimum temperature limits in MACT assure adequate combustion. The viscosity of the waste is more relevant to liquid wastes that are incinerated through waste nozzles located in burners themselves. The RFAAP wastes do not enter the combustion chamber through the burner. They enter the combustion chamber on the opposite side of the front face of the burner and are fired through an externally atomized nozzle.
Given these explanations, DEQ indicated that the information was not required but did request some discussion on this in the NOD response letter.

DEQ Response (1-2) – This comment is satisfied with the information provided by RAAP.

17. **Attachment II.B, Sections II.B.5, Page II.B-8 Waste Analysis Requirements**, The following are a list of the test methods for the hazardous waste to be incinerated along with the resulting residue and corresponding sections in which they can be found:

    II.B.5, Waste Analysis Requirements, Last Paragraph – Compatibility testing for waste streams, a reference to actual test procedure being performed should be included if there is a standard established for it.

    II.B.5a, Analysis of Waste Groups, Waste Profiling Analysis - Laboratory analysis of waste streams using appropriate tests from EPA document SW-846 Test Methods for Evaluating Solid Waste, 3rd Edition, 1986, as updated, or facility standard operating methods which achieve the performance specifications specified in the equivalent SW-846 method.

    II.B.5b, Analysis of Waste Groups, Waste Profiling Analysis – Incinerator ash to be tested using Toxicity Characteristic Leaching Procedure, SW-846 Method 1311.

    II.B.5c, Analysis of Waste Groups, Quality Assurance and Quality Control - All sampling and analyses performed in accordance with this Waste Analysis Plan will, at a minimum, achieve all performance specifications specified in the equivalent SW-846 methods.

    Appendix BB-3 – On-site Laboratory Analysis for Presence of Propellant, Composite Sample Analysis Using SW 846 Method 8330, Reactivity Test Procedures for Incinerator Ash: Gap Test for Solid Materials, Deflagrations/Detonation Transition Test.

Radford Response (1-1), (Response received on 12/11/2014) - Information stated is correct. There is no standard established for compatibility testing.

DEQ Response (1-1) – Methods are available to determine to compatibility of waste streams as discussed in the attached guidance documents "A Method for Determining the Compatibility of Hazardous Waste", dated April 1980, and "Waste Analysis at Facilities that Generate, Treat, Store and Dispose of Hazardous Wastes", dated April 1994. RAAP will determine an appropriate method to test compatibility and incorporate into the revised permit application.

Radford Response (1-2), (Response received on 3/6/2015) – Information stated is correct. There is no standard established for compatibility testing, and material compatibility is established by the Department of Defense during product military standard development. RFAAP to modify the procedural descriptions to reflect issues on compatibility testing identified in NOD 2.20.

DEQ Response (1-2) – DEQ will review the revised language submitted by RAAP to determine if it satisfies the comment.

18. **Attachment II.B, Waste and Residue Sampling**, The following are the specific language in different sections which define sampling frequency for waste analysis. With the exception of the frequency of sampling for incinerator ash in II.B.4b all are technically adequate. Please revise the language of II.B.4b accordingly:

II.B.4a, Waste Sampling – *"Samples for characterizing the managed wastes are collected on a daily basis, Monday through Friday during the daylight shift,"*

Radford Response (1-1), (Response received on 12/11/2014) - This procedure has been revised to collect samples every day of the week as the wastes are loaded onto the trolley conveyor. Revise referenced language to reflect current (more frequent) procedure.

DEQ Response (1-1) – This will satisfy the comment.

Radford Response (1-2), (Response received on 3/6/2015) – The referenced procedure has been revised to include more frequent sampling. RFAAP will update the language in the application to match the current procedure.

DEQ Response (1-2) - This will satisfy the comment.

II.B.4b, Residue Sampling – *"Composite samples of the incinerator residues are collected periodically as required to characterize the wastes for offsite disposal."* The sampling frequency is not technically adequate to ensure compliance with the permit limitations. A regular testing frequency based on time or amount of incinerator ash residue collected should be established.

Radford Response (2-1), (Response received on 12/11/2014)) - Propose as once per shipment.

DEQ Response (2-1) – The proposed sampling frequency will satisfy the comment made.

Radford Response (2-2), (Response received on 3/6/2015) –Information stated is correct. There is no standard established for compatibility testing, and material compatibility is established by the Department of Defense during product military standard development. RFAAP to modify the procedural descriptions to reflect issues on compatibility testing identified in NOD 2.20.

DEQ Response (2-2) – The response submitted does not match RAAP's prior submitted response to the comment nor address the sampling frequency the comment is directed at. DEQ asks for clarification from RAAP regarding their response.

II.B.5, Waste Analysis Requirements – *"In addition to the hazardous determination for each waste group, all wastes stored or treated at the facility are tested for compatibility with nitroglycerin (NG) and nitratability when they are first generated."*

Radford Response (3-1), (Response received on 12/11/2014) - No changes required.

DEQ Response (3-1) – Concur with RAAP's response.

Radford Response (3-2), (Response received on 3/6/2015) – Information stated is correct. There is no standard established for compatibility testing, and material compatibility is established by the Department of Defense during product military standard development. RFAAP to modify the procedural descriptions to reflect issues on compatibility testing identified in NOD 2.20.

DEQ Response (3-2) - The response submitted does not match RAAP's prior submitted response to the comment. DEQ asks for clarification from RAAP regarding their response.

II.B.5a, Analysis of Waste Groups – *"Every waste profile will be reviewed at least annually in order to confirm that it still accurately represents the waste stream. A waste stream will be re-profiled whenever the Permittees have reason to believe that the process or operation generating the hazardous waste has significantly changed."*

Radford Response (4-1), (Response received on 12/11/2014) - The information specified is correct. No changes required.

DEQ Response (4-1) – Concur with RAAP's response.

Radford Response (4-2), (Response received on 3/6/2015) – Information stated is correct.

DEQ Response (4-2) – Concur with RAAP's response.

19. **Attachment II.B, Waste Accumulation and Handling, Page II.B-6,** RAAP will need to clarify whether the proposed NRU qualifies as an off-site generator and therefore will need to generate their own waste analysis plan and comply with that to demonstrate compliance with the waste sampling and analysis requirements for the Part B renewal permit.

    Radford Response (1-1), (Response received on 12/11/2014) - The NRU does not qualify as an off-site waste generator. The NRU, while not within the same contiguous property of the main RFAAP complex, is under the same ownership and operation as the main area and considered part of the RFAAP.

    DEQ Response (1-1) – As discussed in the meeting between DEQ and RAAP the NRU is not considered part of the RAAP facility and will require a separate permitting action for storage of hazardous waste greater than 90 days. The class 3 permit modification, dated April 16, 2012, allows hazardous wastes from tenant organizations to be accepted following a notification procedure to the DEQ. However waste streams for the NRU were not included in the permit modification. Please include the modified language, including a WAP for the NRU wastes if they are to be included, in the revised permit application to be submitted.

    Radford Response (1-2), (Response received on 3/6/2015) – See prior discussions regarding the NRU under NOD 2.7.

    DEQ Response (1-2) – The comment is satisfied in regards to tenant waste being treated in the incinerator but is unsatisfied for wastes from the NRU. The questions raised by DEQ detailed in the response to comment 7 of this section will need to be answered by RAAP.

20. **Attachment II.B, Waste Analysis Requirements, Page II.B-8,** The test methods and procedures for waste incompatibility need to be clarified further than the current description which follows:

    "The compatibility testing is performed utilizing a multi-test apparatus methodology, which, when completed, provides the data necessary to determine the compatibility of waste groups."

    The specific testing methodology needs to be cited, or if a comparable facility method is to be used, and the actual specific volume of gas generated during the described testing method for each waste group needs to be identified.

    Radford Response (1-1), (Response received on 12/11/2014) - We are gathering the requested information and will revise the description in the revised application.

    DEQ Response (1-1) – The DEQ will evaluate the information submitted to determine if it satisfies the comment made.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that all wastes are inherently compatible because they primarily consist of the same ingredients. Any compatibility concerns between products or process materials are addressed by the Department of Defense during development of the military specifications for the products that are made at the RFAAP. Furthermore, RFAAP clarified that the materials in the slurry tanks don't truly mix together. Instead, the propellant is ground into 1/4-inch chunks that are then suspended in water. (The slurry is not a solution or even a dispersion, it is a mixture of chunks of propellant in water). Therefore, concerns with mixing of ingredients, as one may have when mixing liquid organic waste streams, is not a concern.

With this explanation, DEQ was satisfied with the issue of waste compatibility. No additional testing is required. RFAAP will add some discussion on these issues into the compatibility testing section of the waste analysis plan.

DEQ Response (1-2) – The DEQ will evaluate the revised language submitted to determine if it satisfies the comment made.

21. **Attachment II.C, Section II.C.1, General Inspection Requirements**, The submitted application has removed the inspection form descriptions from the permit language. The inspection forms and descriptions are required to ensure compliance with the permit requirements. A revised section with this language included shall be submitted.

Radford Response (1-1), (Response received on 12/11/2014) – 40 CFR § 270.14(b)(5) requires that a copy of the inspection schedule be included in the application. The general requirements for this inspection schedule are discussed in 40 CFR § 264.15…the schedule "must identify the types of problems which are to be looked for during the inspection." Nothing within this section or 40 CFR § 270.14(b)(5) requires submittal of actual inspection checklists. The inspection schedule included in Attachment II.C, specifically in Table II.C-1 and II.C-2 provides the required level of detail specified in the regulation. The items that are inspected are identified, the types of problems that are evaluated are specified, and the frequency of inspection is noted.

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. After discussion with the facility the DEQ will accept copies of the current inspection checklists with the revised permit application for review but not inclusion into the permit document itself as long as the inspection checklists are deemed adequate by the DEQ

Radford Response (1-2), (Response received on 3/6/2015) – See prior discussions regarding inspection sheets under NOD 1.11.

DEQ Response (1-2) – The submission of the checklists for review with the revised permit application, but not to be included in the final permit document, will satisfy the comment.

22. **Attachment II.C, Section II.C.2, Inspection Schedule**, The submitted language does not require daily inspections of equipment subject to Subparts BB and CC as per 40 CFR 264.347(b). The permittee will revise the language to reflect daily inspections of applicable equipment.

    Radford Response (1-1), (Response received on 12/11/2014) - This equipment is included on the inspection schedule in Table II.C-1 at a daily frequency.

    DEQ Response (1-1) – The information identified by RAAP satisfies the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – This equipment is included on the inspection schedule in Table II.C-1 at a daily frequency.

    DEQ Response (1-2) – The information identified by RAAP satisfies the comment made.

23. **Attachment II.C, Section II.C.3, Inspection Recordkeeping,** The submitted language has struck out the requirement that the records will contain the inspector's full name, date and signature, notation of observation made and the date and nature of the repairs or remedial action. The revised draft permit condition shall require all of these items to be addressed.

    Radford Response (1-1), (Response received on 12/11/2014) - We believe the reference should be to Section II.C.4, not Section II.C.3. Assuming that is correct, the struck language was moved to earlier in this paragraph to add clarity to the requirement. This section is consistent with the requirements contained within 40 CFR § 264.15(d). None of the requirements specified in 40 CFR § 264.15(d) are missing from this paragraph.

    DEQ Response (1-1) – RAAP is correct regarding the mislabeled section for this comment. The language has been identified and is deemed adequate to satisfy the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – The struck language was moved to earlier in the referenced paragraph to add clarity to the requirement.

    DEQ Response (1-2) – RAAP is correct regarding the mislabeled section for this comment. The language has been identified and is deemed adequate to satisfy the comment made.

24. **Attachment II.C, Section II.C.5 and Table II.C.2, Pages II.C-3, II.C-4 and II.C-6,** The submitted permit language as revised by the permittee does not meet the minimum standards for emergency equipment as described in 40 CFR 264.32 which requires a device capable of summoning emergency assistance from local emergency services. The permit language states the telephones located in the control rooms, incinerators and storage rooms are only able to reach each other and other areas of the plant and not to outside emergency services. Additionally the submitted language has removed the numerical maximum capacity of the type ABC fire extinguisher and a list of PPE from Table II.C.2. The language shall be revised to incorporate these elements.

Radford Response (1-1), (Response received on 12/11/2014) - Information pertaining to the maximum capacity of the fire extinguishers included in Table II.C-2 was never included in this table. Reviewing the submittal made to DEQ, no changes were made to the row in this table that addresses fire extinguishers.

In regards to the PPE requirements that were listed previously. The PPE required will vary depending on the emergency at hand. Therefore, specifying unique PPE in this table is inappropriate and the reference was removed. In fact, nothing within 40 CFR § 264.32 requires specification of PPE. Inclusion of it in this table was for completeness purposes only.

DEQ Response (1-1) – Identifying the PPE a facility has on-site is necessary for the DEQ to determine whether the facility has the ability to properly handle and mitigate any hazardous waste releases at the facility. RAAP will submit a revised table which includes the information identified by the comment or the comment will remain unresolved and will be included in a follow up Notice of Deficiency document.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that PPE requirements were removed from this table as they vary depending on the situation and wastes being managed. DEQ requests that some information on PPE still be included. RFAAP suggested footnoting the table to indicate that PPE specified would vary depending upon the situation. RFAAP to modify table to include examples of PPE (and specify that they are in fact examples and not applicable to all situations).

DEQ Response (1-2) – DEQ will evaluate the submitted language of the revised permit application to determine if the comment is satisfied.

Radford Response (2-1), (Response received on 12/11/2014) - The entire permitted storage and treatment area functions as one unit in the event of an emergency. Phones are available at each unit to contact the control room or other extensions at the facility. Additionally, all operators carry two way radios and cellular phones that can reach the control room and/or fire department if they are unable to get to the phones. All emergency notices are directed to the fire department, who is responsible for requesting outside aide for the entire facility. No requests for outside aide are permitted to circumvent the fire department.

DEQ Response (2-1) – Please include additional language in the revised permit application which states that all operators are required to carry two way radios and cell phones with the capability of contacting outside resources in case of an emergency. While the DEQ understands that the RAAP facility is unique in that it has an in-house fire and emergency response department on-site the requirement for having phones at the units which can contact the outside for assistance is a regulatory one which needs to be satisfied in order for the application to be considered technically complete.

Radford Response (2-2), (Response received on 3/6/2015) – RFAAP explained that procedures for summoning outside assistance are closely managed at the facility through the fire department. For example, any outside assistance that is provided must be escorted to the location at which it is needed and must be briefed on the hazards at hand in that location. (Ambulances or fire officials cannot simply come through the gate and respond to an incident). Therefore, outside assistance and the summoning and management of it must be closely regulated by the facility. All operators carry cellular phones or radios that can contact the control room and the fire department. The fire department will then contact outside aide if necessary.

DEQ, after reviewing the explanation on outside service management, was satisfied with the resources and procedures available.

RFAAP shall add language to the referenced section of the permit that more closely explains this process.

RFAAP to modify the description on outside assistance to describe how it is summoned and managed.

DEQ Response (2-2) – DEQ will evaluate the submitted language of the revised permit application to determine if the comment is satisfied.

25. **Attachment II.D-1, Table II.D-1, Page II.D-6,** The table listing the jobs titles, job descriptions and training required does not identify the personnel filling these roles as required by 40 CFR 264.16(d)(1).

    Radford Response (1-1), (Response received on 12/11/2014) – The changes made to this plan were consistent with those made, reviewed, and approved for our facility's post-closure care permit, as we wanted the training plan in each permit to be identical.

    Request DEQ clarification as to why the level of detail that was sufficient for the post-closure care permit is not sufficient for this permit. (Note that this table is actually more detailed than that which was included in the PCC permit, as it includes the "training required" column.

    DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the PCC permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that names of individuals are withheld for security reasons but are available to inspectors upon request. DEQ requested that a statement to this effect be added to the permit application. RFAAP to add a statement concerning personnel security requirements to the permit application.

DEQ Response (1-2) – DEQ will evaluate the submitted language of the revised permit application to determine if the comment is satisfied.

26. **Attachment II.D-1, Section II.D.4, Page II.D-1, Training Coordinator**, The submitted language should be changed to revise the reference to the "Training Coordinator" to "Training Director" as specified in 40 CFR 264.16(a)(2).

    Radford Response (1-1), (Response received on 12/11/2014) – The changes made to this plan were consistent with those made, reviewed, and approved for our facility's post-closure care permit, as we wanted the training plan in each permit to be identical.

    Request DEQ clarification as to why the level of detail that was sufficient for the post-closure care permit is not sufficient for this permit. (Note that this table is actually more detailed than that which was included in the PCC permit, as it includes the "training required" column.

    DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the PCC permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the same terminology was used between all of the facility's RCRA permits and they wished to maintain this consistency.

    DEQ Response (1-2) – This comment is satisfied.

27. **Attachment II.D-1, Appendix II.D-1, Page II.D-2, Section 6,** The submitted language for training on emergency procedures does not meet the standard required by 40 CFR 264.16(a)(3). The language should be revised to address the following elements in the training for emergency procedures:

    1. *"Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;*

2. *Key parameters for automatic waste feed cut-off systems;*

3. *Communications or alarm systems;*

4. *Response to fires or explosions;*

5. *Response to ground-water contamination incidents; and*

6. *Shutdown of operations."*

Radford Response (1-1), (Response received on 12/11/2014) – The changes made to this plan were consistent with those made, reviewed, and approved for our facility's post-closure care permit, as we wanted the training plan in each permit to be identical.

Request DEQ clarification as to why the level of detail that was sufficient for the post-closure care permit is not sufficient for this permit. (Note that this table is actually more detailed than that which was included in the PCC permit, as it includes the "training required" column.

DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the PCC permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that this training plan was written to be consistent with the training plan in the other RCRA permits for the facility. DEQ understood the need for consistency but feels that these specific elements should be more clearly addressed.

RFAAP will add a bullet list to the training plan clarifying that these elements are discussed and providing a brief description of how they are addressed.

DEQ Response (1-2) – DEQ will evaluate the submitted language of the revised permit application to determine if the comment is satisfied.

28. **Attachment II.D-1, Appendix II.D-1, Section 7, Implementation of Training Plan, Page II.D-2,** The revised language as submitted is not sufficient to meet the standards required by 40 CFR 264(b) and 40 CFR 264(d). The revised language shall be removed and the original permit language shall be included. The original permit language is as follows:

"There exists at Radford an extensive system to ensure that required on-the-job training has been conducted with each employee. When an employee performs a job, he submits a job card which has a code number that indicates the department he works in, his employee number and the operation number for the job he performed. When the cards are processed for payroll accounting through the computer, the computer also searches the employee's training history to determine if the employee was trained in the jobs he performed. If the computer search finds that the employee was not properly trained, it prints out a notice of the training deficiency. This notice is then routed to the foreman so the deficiency may be corrected.

Training records and computer based training (CBT) is maintained by the Training Department. The system notifies supervision when training is required. Non CBT is recorded when supervisors submit the information to the Training Department for update. Training of area procedures is recorded in the CBT system.
Current training records of employees involved with hazardous waste management will be kept until closure of the hazardous waste facilities. Training records on former employees will be kept for at least three years from the date the employee last worked at the facility."

Radford Response (1-1), (Response received on 12/11/2014) – The changes made to this plan were consistent with those made, reviewed, and approved for our facility's post-closure care permit, as we wanted the training plan in each permit to be identical.

Request DEQ clarification as to why the level of detail that was sufficient for the post-closure care permit is not sufficient for this permit. (Note that this table is actually more detailed than that which was included in the PCC permit, as it includes the "training required" column.

DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the PCC permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP clarified that the desired language is still in the permit but has been shifted to another location. RFAAP to provide direction to DEQ on where they can find the missing language.

DEQ Response (1-2) – This comment is satisfied.

29. **Attachment II.E, Section II.E.1a, Purpose, Page II.E-3,** The submitted language is significantly less descriptive and detailed than the previous version. The revised language shall either simply use the struck out text or revise the entire section to incorporate the level of detail found in the original language. Additionally language regarding the Spill Control and Counter Measure plans shall be included.

    Radford Response (1-1), (Response received on 12/11/2014) - The text in question made reference to non-regulatory based emergency response plans. These plans were not designed to specifically manage environmental incidents resulting from the release of hazardous waste to the environment. Therefore, the references to and inclusion of them or their outlines in the appendices were removed from this document. When necessary, information from these plans was added to the Contingency Plan to make an accurate accounting of emergency management for hazardous waste releases.

    In regards to the specific reference to the SPCCP - 40 CFR § 264.52(b) permits facilities to utilize the SPCC plan (or another emergency or contingency plan) to meet the requirements of this section. However, it does not require incorporation of such plans into the Contingency Plan if the owner or operator wishes to develop and rely upon a separate plan for meeting this requirement. In consideration of our facility's hazardous waste management practices, we have opted to develop a separate, standalone plan for management of hazardous waste emergencies

    DEQ Response (1-1) – RAAP will revise the language of the permit application to include the standalone plan for management of hazardous waste emergencies and submit to DEQ for review and approval in order to satisfy the comment made.

    Radford Response (1-2), (Response received 3/6/2015) – RFAAP explained their concerns about incorporating non-RCRA required plans into the Contingency Plan. As a result, RFAAP removed all of the referenced and included non-RCRA plans from the Contingency Plan and added detail as necessary to supplement that removal. DEQ will take another look at the Contingency Plan and see if any required information is missing as a result of the removal of the non-RCRA documentation.

    DEQ Response (1-2) – RAAP shall submit a copy of the current Spill Control and Countermeasure (SPCC) plan with their revised application and DEQ will evaluate the current SPCC plan against what is included in the section of the contingency plan to determine if the included language is sufficient to ensure protection of human health and the environment. If the included language is found to be deficient DEQ will require the relevant parts of the current SPCC identified to be protective of human health and the environment to be included in the final permit language.

30. **Attachment II.E, Section II.E.2b.ii.2, Purpose, Page II.E-6,** References to the grind house slurry tanks shall include “hazardous waste” in their descriptors.

Radford Response (1-1), (Response received on 12/11/2014) - We will make appropriate modifications to Section II.E.2b.ii as requested. However, please note that both hazardous and non-hazardous wastes are managed in the Grinder Building. Our revisions will reflect this.

DEQ Response (1-1) – Managing non-hazardous waste in the tanks will require RAAP to perform an analysis on the composition of the non-hazardous waste streams being introduced into the tank system as this could affect everything from the WAP, to the RA to other conditions and requirements. If RAAP chooses not to allow non-hazardous waste streams to be managed in the grinder building the DEQ will accept the inclusion language stating only hazardous wastes will be managed in the grinder building in the revised permit language as satisfying the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP noted that both hazardous and non-hazardous wastes are handled in the slurry tanks. RFAAP will correct the description of the tanks to reference both hazardous and non-hazardous tanks.

DEQ Response (1-2) – RAAP has not adequately addressed the concerns DEQ has regarding the management of hazardous and non-hazardous waste streams in the slurry tanks. This comment will not be satisfied until RAAP provides a technical explanation which addresses these concerns.

31. **Attachment II.E, Section II.E.2c.i, Composition of Waste, Page II.E-8,** The submitted language has struck out the last sentence of the first paragraph of the section, which describes the 19 waste streams. As noted in previous comments, the 19 waste streams are to be included in the revised permit application. The revised language shall be as follows:

    "These wastes may be hazardous due to the ignitability, reactivity, or toxicity characteristics. These categories are segregated into 19 distinct waste groups, as listed in Table 2; all wastes that are stored, treated, and incinerated at the facility fall into one of these groups."

    Radford Response (1-1), (Response received on 12/11/2014) - We had eliminated much of this discussion and simply made reference to the WAP for detailed information on the waste streams. However, recognizing the standalone nature of this plan, we will add the text as requested above. We will also add Table 2 back into the plan and assign it an appropriate table number in sequence with its order of reference.

    DEQ Response(1-1) – These changes will satisfy the comment.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP recognizes the need for the waste descriptions in the Contingency Plan given the standalone nature of the plan. We will add a description of the waste to this Plan. RFAAP will add a description of the managed wastes to the Contingency Plan. This description will be consistent with the WAP.

    DEQ Response (1-2) – DEQ will evaluate the submitted language of the revised permit application to determine if the comment is satisfied.

32. **Attachment II.E, Section II.E.2c.ii, Identification and Quantity of Waste, Page II.E-8,** The submitted permit revisions show a change in the capacity of the slurry tanks from 1,700 gallons to 1,900 gallons for both tanks. Were the tanks replaced during the permit term or were the submitted sizes in the original permit application incorrect?

    Radford Response (1-1), (Response received on 12/11/2014) - The sizes of the tanks included in the original permit application were in error. If a search of the prior application is made, you can find references to both sizes. The correct volume is 1,900 gallons per tank.

    DEQ Response (1-1) – The corrected sizes of the tanks and explanation satisfies the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP clarified that the sizes of the tanks included in the original permit application were in error. If a search of the prior application is made, you can find references to both sizes. The correct volume is 1,900 gallons per tank.
    DEQ Response (1-2) – The corrected sizes of the tanks and explanation satisfies the comment made.

33. **Attachment II.E, Section II.E.3, Emergency Coordinators, Table II.E-1,** The table provided does not provide the name, telephone number and address of all emergency coordinator contacts as required by 40 CFR 264.52(d).

    Radford Response (1-1), (Response received on 12/11/2014) - The names, phone numbers, and address of each of the assigned EC's is provided in Table II.E-1. The environmental emergency on-call representative and safety on-call representative changes routinely on a rotating basis. Therefore, neither specific names or addresses were specified. Please note that since this submittal, the assignments indicated in this table have changed. These changes were submitted to the DEQ via a Class I permit modification. We will update this table to reflect those changes.

    DEQ Response (1-1) – The routine changing of responsible persons as emergency contacts in the permit can be addressed by permit modification as RAAP has identified. As this information is explicitly required by regulation the facility will continue to submit permit modifications any time the information on this list is out of date. DEQ will review the revised language once an updated permit application is submitted to determine if it satisfies the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP provided an explanation of the way in which emergency coordinators are contacted. DEQ requested that this information (and reference to DUP-RQ call list if appropriate) be added to the permit application. RFAAP also explained the security precautions that prevent listing of home addresses and telephone numbers in the Permit.

DEQ was satisfied with this explanation. RFAAP will make the necessary additions to the emergency coordinator contact list and add reference to the security procedures that are in place.

DEQ Response (1-2) – DEQ will evaluate the revised language submitted by RAAP to determine if the comment is satisfied.

34. **Attachment II.E, Section II.E.4, Implementation, Pages II.E-10,** The implementation requirements for the contingency plan regarding leaks are unenforceable. Language which states that a release of 1 pound or more constitutes a reportable leak, as an un-reportable spill is defined in Section II.E-9, and will require the contingency plan to be implemented to clean and contain the spill will need to be added to the section. Additionally the sentence *"The EC will determine whether the Contingency Plan should be implemented"* has been struck from the end of the section. The language shall be included in the revised submission.

Radford Response (1-1), (Response received on 12/11/2014) - The referenced language was duplicative of language found at the beginning of this section. Please refer to the first paragraph in Section II.E.4, which states "The EC will be responsible for evaluation of any situation to determine if the Contingency Plan will be implemented".

DEQ Response (1-1) - The information identified by RAAP has been located and is adequate to satisfy the comment made.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the referenced language was duplicative of language found at the beginning of this section and directed DEQ to the first paragraph in Section II.E.4, which contains the requested language.

DEQ Response (1-2) - The information identified by RAAP has been located and is adequate to satisfy the comment made.

Radford Response (2-1), (Response received on 12/11/2014) - 40 CFR § 264.51 does not provide any actionable level for implementation of the Contingency Plan. As noted therein: "The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment." The language pertaining to the release of one pound or more originates from the reportable quantity requirements promulgated through CERCLA, under 40 CFR § 302. However, reporting under CERCLA does not contain the same limitations as those referenced above for implementation of the Contingency Plan. Reporting under CERCLA is required anytime that a release occurs in a quantity equal to or exceeding the reportable quantity, regardless of whether it threatens human health or the environment. Therefore, inclusion of the one-pound limitation in the Contingency Plan reflects more stringent implementation of RCRA regulations within the RCRA framework than that specified under the rule

DEQ Response (2-1) – RAAP may submit a revised numerical limit for mass of releases which will cause the contingency plan to be implemented, including a technical justification as to why the limit submitted is protective of human health and the environment, which will be reviewed and approved by the DEQ. The attached guidance document *"Hazardous Waste Contingency Plans"* from the Indiana Department of Environmental Management includes the criteria on Page 2 for when a contingency plan will be implemented. RAAP will develop and submit numerical limits for the various waste streams and/or components of waste streams which fit the criteria described in the guidance.

Radford Response (2-2), (Response received on 3/6/2015) – RFAAP expressed concerns over incorporating non-RCRA based implementation and reporting requirements (*e.g.*, CERCLA reporting levels) into the Contingency Plan.

DEQ explained that they needed some finite direction in the plan to provide the emergency coordinator on implementing the plan. However, a numerical limit was not necessarily required. Information on types of offsite impacts that should be considered when implementing the contingency plan would be sufficient.

RFAAP to modify the language concerning plan implementation to address the consideration of offsite impacts. If any of these triggers are satisfied, then the contingency plan should be implemented.

DEQ Response (1-2) – DEQ will evaluate the revised language submitted by RAAP to determine if the comment is satisfied.

35. **Attachment II.E, Section II.E.5c, Prevention of Recurrence or Spread of Fires, Explosions or Releases, Page II.E-12,** The submitted permit language has been revised to exclude conditions which will trigger an emergency shutdown of the incinerators. The revisions as submitted are not technically adequate to ensure the incinerators will be shutdown during process upsets. The language shall be revised to the following to be considered technically adequate:

"The incinerators have built-in safeguards against equipment failure during emergency conditions. These safeguards help prevent fires, explosions, or the release of propellant waste slurry. The following conditions will trigger an emergency shutdown of the incinerator safeguards consist of an alarm horn that will sound under the following conditions:

- *The control system fails;*
- *The incinerator burner stops burning;*
- *An electrical power failure occurs;*
- *The induced draft fan fails;*
- *The kiln stops rotating;*
- *When safety interlock feed pump fails or malfunctions;*
- *The cooling and re-circulating pump fail-safe systems activate;*
- *The air compressor fail-safe system is activated;*

- *A high temperature (safety) limit is reached in the kiln, afterburner, or evaporative cooler."*

Radford Response (1-1), (Response received on 12/11/2014) - The intent of this list is to specify the emergency conditions under which it is necessary to shutdown the incinerators to protect the safety of personnel or equipment. All "upsets" do not warrant this level of reaction. Furthermore, this level of reaction in all instances would in no uncertain terms result in increased harm to human health and the environment. RFAAP feels that the conditions as specified in our application are technically adequate and further feels that revision of these conditions as requested by DEQ will result in increased harm to human health and the environment. Therefore, we do not concur with revision of them to the previous state.

DEQ Response (1-1) – As there are only two items which were struck from the original permit language: "*The incinerator burner stops burning"* and *"When safety interlock feed pump fails or malfunctions;"* please provide a technical justification as to why RAAP has indicated that inclusion of these two items on the list of events which will trigger an emergency shutdown will result in greater harm to human health and the environment. As these items were included on the previously approved permit the DEQ does not understand the reasoning RAAP has proposed as to why these terms are suddenly unacceptable to the facility.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the list in the existing permit was not correct and not protective of human health and the environment and detailed reasons why an emergency shutdown would not be desirable for the two struck conditions.

DEQ expressed satisfaction with the technical justification provided and indicated they were okay with removing burner loss and interlock failure from the shutdown list.

DEQ Response (1-2) – The comment is satisfied. Please provide a written version of the technical justification in the revised permit application package for the administrative record. The technical justification does not have to be included in the final permit language but does have to be reflected in the administrative record.

36. **Attachment II.E, Section II.E.6b.ii, Notification of Federal, State and Local Agencies, Page II.E-13,** The submitted language for this section has struck out the language regarding notification of releases above the reportable quantities listed under 40 CFR 302.4. The language shall be included in the revised submission.

Radford Response (1-1), (Response received on 12/11/2014) – Reporting of releases under CERCLA is not a required component of a Contingency Plan under 40 CFR § 264.52 and has, therefore, been struck from this Contingency Plan. Management of CERCLA reporting requirements will be handled when necessary following all applicable requirements outside the context of this Contingency Plan. Those reporting requirements applicable to the Contingency Plan and specified in 40 CFR § 264.56 have been addressed herein as required in Section II.E.6b

DEQ Response (1-1) - RAAP may submit a revised numerical limit for mass of releases which will cause the contingency plan to be implemented, including a technical justification as to why the limit submitted is protective of human health and the environment, which will be reviewed and approved by the DEQ The attached guidance document *"Hazardous Waste Contingency Plans"* from the Indiana Department of Environmental Management includes the criteria on Page 2 for when a contingency plan will be implemented. RAAP will develop and submit numerical limits for the various waste streams and/or components of waste streams which fit the criteria described in the guidance.

Radford Response (1-2), (Response received on 3/6/2015) – See discussion under NOD 2.34(a).

DEQ also commented that a Contingency Plan was required for the less than 90 day storage areas and questioned if one existed. RFAAP will review the requirements for less than 90 day storage areas and respond appropriately.

DEQ Response (1-2) – DEQ believes that RAAP has incorrectly cited the comment response to 2.34(a) instead of the correct 2.34(b). Regardless as stated by RAAP in the response to 2.34(b) DEQ will evaluate the revised language submitted by RAAP to determine if the comment is satisfied.

37. **Attachment II.E, Section II.E.6d, Containment, Countermeasures, Clean-up and Disposal, Page II.E-17,** The submitted language has struck out reference to the Open Burning Ground (OBG) in the section. The reference shall be included in the revised permit submission as the incinerator and OBG handle identical waste streams and any contingency or countermeasure plans included in either RCRA permit for each unit should mirror each other.

Radford Response (1-1), (Response received on 12/11/2014) - This Permit covers operation of the incinerators. A separate Permit covers operation of the OBG. In the OBG application, RFAAP is taking efforts to make sure that the emergency response and cleanup actions are similar and differ only when appropriate based on the technical and locational differences of the two areas. The incinerators and the OBG are not located physically near one another and a hazardous waste emergency at one unit will not impact the operations at the other unit. Therefore, inclusion of references in this plan to managing emergencies at the open burning ground is not appropriate.

DEQ Response(1-1) – While RAAP is correct in stating the permit currently being renewed is for the incinerator operation the OB/OD permit issued to the facility permits the open burning of the same waste groups which are permitted to be thermally treated in the incinerator with the exception of the nitro cellulose contaminated material waste group in the OB/OD permit and therefore both permitted activities deal with the same types of potential hazards and emergencies while handling the waste groups. RAAP's assertion that the operations are not related is therefore incorrect and not a technically sufficient reason to remove the language from the permit application. RAAP's second assertion that the distance between the operations can be used to justify the removal of the language is also incorrect as both operations handle the same waste groups and as a result will need similar procedures to adequately deal with emergencies at both permitted units.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over including the OBG in this permit application, as there is a separate Permit covers operation of the OBG. In the OBG application, RFAAP is taking efforts to make sure that the emergency response and cleanup actions are similar and differ only when appropriate based on the technical and locational differences of the two areas. The incinerators and the OBG are not located physically near one another and a hazardous waste emergency at one unit will not impact the operations at the other unit. Therefore, inclusion of references in this plan to managing emergencies at the open burning ground is not appropriate.

DEQ was satisfied with this explanation and no further action is required. DEQ understands that in general the plans for both permits will be similar.

DEQ Response (1-2) – DEQ will evaluate the revised language submitted by RAAP to determine if the comment is satisfied.

38. **Attachment II.E, Section II.E.6d.9, Incompatible Wastes, Page II.E-19,** The submitted permit language states no incompatible wastes will be managed on-site but does not provide any language stating which recordkeeping procedures will be in place to ensure compliance with the requirement. The facility will need to submit language to this effect regarding recordkeeping to ensure incompatible wastes are not managed together.

Radford Response (1-1), (Response received on 12/11/2014) - We are gathering the requested information and will revise the description in the revised application.

DEQ Response (1-1) - The DEQ will evaluate the information submitted to determine if it satisfies the comment made.

Radford Response (1-2), (Response received on 3/6/2015) – See comments regarding compatibility testing under NOD 2.20.

DEQ Response (1-2) – The DEQ will evaluate the information submitted to determine if it satisfies the comment made.

39. **Attachment II.E, Section II.E.6.3(i) and (ii), Tanks Spills and Leakage,** Incinerator Spills and Leakage, Pages II.E-19 and II.E.20, The submitted permit application does not include any language regarding emptying of a leaking tank within 24 hours of discovery or as soon as practicable as required by 40 CFR 264.196. The language should be revised to reflect this limitation in the regulations.

Radford Response (1-1), (Response received on 12/11/2014) - The second paragraph of Section II.E.6e(i) indicates that "upon detection and visual inspection of a leak or spill, RFAAP will comply with all applicable requirements of 9 VAC 20-60-264 and 40 CFR § 264.196. This reference incorporates the 24-hour requirement, as well as all other requirements specified in 40 CFR § 264.196. In addition, the following sentence, which is found later in this same paragraph appears to address DEQ's concern: "…any leaking tank will be emptied...Waste will be removed from the tanks, containment system, and/or floor sump within 24 hours."

DEQ Response (1-1) – The information identified by RAAP satisfies this portion of the comment.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP directed DEQ to the requested language, which was included in the permit application but had been relocated for clarity. (Reference the second paragraph of Section II.E.6e(i)).

DEQ Response (1-2) – The information identified by RAAP satisfies this portion of the comment.

RAAP will also need to submit PFD, P&ID, and cross sections depicting gaps, joints, water stops, sewers, valves, concrete thicknesses, types - design data manufacturers data/specs and seams.

Radford Response (2-1), (Response received on 12/11/2014) - Need specific information what PFDs and PIDs are being requested. No specific regulatory reference for inclusion of drawings.

DEQ Response (2-1) – PFDS and PIDS for the tank system and associated equipment, pumps, etc are required to satisfy this comment. If further clarification is needed the comment can be addressed via conference call or physical meeting to make DEQs request more explicit.

Radford Response (2-2), (Response received on 3/6/2015) – RFAAP directed DEQ to drawings (PFDs and P&IDs) that were included in the permit application. (Reference drawings in Attachment III.1.A). DEQ requested either a color copy or a darker copy of these drawings. Absent that, no further information is required. RFAAP to provide additional copies of the subject drawings.

DEQ Response (2-2) – The DEQ will evaluate the information submitted to determine if it satisfies the comment made.

The reference to 40 CFR 264.197(c) at the end of the second paragraph shall be included in the revised permit application.

Radford Response (3-1), (Response received on 12/11/2014) - We believe the reference should be to 40 CFR 264.196(e) instead. Assuming this is correct, there are several exclusions in 40 CFR § 264.196(e) that we would like added to this language if it is to be retained. The current language indicates that the tank will be closed if it cannot be repaired. This is not consistent with the requirements of 40 CFR § 264.196(e).

DEQ Response (3-1) – The citation identified by RAAP is correct but does reference 40 CFR 264.197 if the requirements in 40 CFR 264.196(e) cannot be attained. RAAP may submit revised language which will be evaluated by DEQ to determine if it is appropriate.

Radford Response (3-2), (Response received on 3/6/2015) – RFAAP requested that if specific language from the CFR will be incorporated to the Permit, the exclusions provided in that reference (40 CFR § 264.196(e)) also be included. DEQ was satisfied with this request. RFAAP to modify the language as proposed.

DEQ Response (3-2) – This satisfies the comment made.

The reference to (GOP 4-15-53) made in the third paragraph of the section will also be included in the revised submission.

Radford Response (4-1), (Response received on 12/11/2014) – The procedures of GOP-4-15-53 are described to the extent necessary in the paragraph in question. Inclusion of the SOP in the text of this paragraph (and as an incorporated permit requirement by reference) is not necessary to ensure compliance with the requirements of Subpart J. If DEQ feels that the language as written does not adequately address all requirements, please provide a specific citation to the missing data and we will modify the text to incorporate the missing information.

DEQ Response (4-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. After discussion with the facility the DEQ will accept copies of the current GOP -4-15-53 with the revised permit application for review but not inclusion into the permit document itself as long as GOP -4-15-53 is deemed adequate by the DEQ.

Radford Response (4-2), (Response received on 3/6/2015) – See discussion under NOD 1.10 regarding inclusion of operating procedures in the permit application.

40. **Attachment II.E, Section II.E.7, Coordination Agreements, Page II.E-21,** A copy of the actual agreements between RAAP and local emergency responders is required to be included in the revised permit submission. Copies of the agreements can be submitted as a part of Appendix II.E-1, Mutual Assistance Agreements.

Radford Response (1-1), (Response received on 12/11/2014) - 40 CFR § 264.52(c) indicates that the Contingency Plan shall "describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams…" The provision does not require that these arrangements be included in the Contingency Plan.

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. As the mutual assistance agreements were previously included in the issued permit, which was reviewed by the RAAP facility prior to issuance, and can be updated using a Class 1 modification whenever necessary the DEQ does not find that RAAP's assertion that the agency has neither the authority or the need for the agreements to be included in the permit application to be correct. RAAP will submit the agreements or refusals as stated in the original comment or the comment will be included in an future NOD.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over including the actual mutual aid agreements in the Contingency Plan. DEQ agreed that these documents do not need to be incorporated into the application or the Permit. However, DEQ would like to see them to confirm that they are in fact in place. RFAAP to provide copies of the mutual aid agreements for DEQ review. Both parties agreed that these agreements will not be included in the actual Permit or application.

DEQ Response (1-2) – RAAP will provide the mutual aid agreements for review by DEQ as part of the permit package to satisfy the comment.

41. **Attachment II.E, Section II.E.9, Required Reports, Pages II.E-23 through II.E.24,** The submitted language has struck out required report and notification sections. These reports are necessary to keep DEQ and the public apprised of any potential issues regarding the handling of hazardous waste. The language shall be included in the revised permit application.

Radford Response (1-1), (Response received on 12/11/2014) - The reporting provisions contained within the modified Section II.E.9 mirror the reporting requirements found in 40 CFR § 264.56. The struck sections eliminated non-RCRA based language that was either included from another regulatory program or internal reporting requirements.

DEQ Response (1-1) – The language of 40 CFR 264.56 is included in the permit application as applicable reporting requirements. However the language of 40 CFR 264.196 was part of the language which was struck from the section and is required to be included in the revised permit application. RAAP will submit a revised permit application including this struck language or the comment will be included in a future NOD document to the facility.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the language stricken from the Permit application concerned internal and non-RCRA based reporting obligations. The language that remains is an exact mirror of the RCRA reporting requirements. DEQ was satisfied with this response.

DEQ Response (1-2) – This will satisfy the comment.

42. **Attachment II.E, Table 2, Waste Groups Burned at the Incinerators Radford Army Ammunition Plant,** The submitted permit application has struck out the table defining the waste groups burned in the RAAP facility's incinerators. Since these waste groups are used as a basis for the risk assessment they shall be included in the revised permit application.

    Radford Response (1-1), (Response received on 12/11/2014) - We recognize that understanding of the wastes managed at the facility is critical for implementation of the Contingency Plan. In our markup, we had included a reference to the WAP for this information. However, in reviewing DEQ's comments regarding the need for this document to act as a standalone document, we will add the deleted table back to this document.

    DEQ Response (1-1) - This action will satisfy the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP recognizes the need for the waste descriptions in the Contingency Plan given the standalone nature of the plan. We will add a description of the waste to this Plan. RFAAP will add a description of the managed wastes to the Contingency Plan. This description will be consistent with the WAP.

    DEQ Response (1-2) – This will satisfy the comment.

43. **Attachment II.E, Table II.E-3, Evaluation Criteria for Implementation of the Contingency Plan,** The permit language as submitted has struck out language referring to the a spill occurring off-site or on-site and when a spill constitutes a release of a reportable quantity. The following language shall be included in the revised permit application:

    "• A spill could result in off-site or on-site soil contamination and/or ground or surface water contamination

    • A spill constitutes a release of a "reportable quantity" of a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)"

    Radford Response (1-1), (Response received on 12/11/2014) - The requirement under 40 CFR § 264.51 does not provide any discussion distinguishing between onsite spills, offsite spills, reportable quantities or non-reportable quantities. The only requirement under this provision is that the Contingency Plan be implemented when "there is…a release of hazardous waste or hazardous waste constituents which could threaten human health or the environment." Further distinction in this plan introduces a complex evaluation strategy that is not appropriate and not required.

DEQ Response (1-1) - RAAP may submit a revised numerical limit for mass of releases which will cause the contingency plan to be implemented, including a technical justification as to why the limit submitted is protective of human health and the environment, which will be reviewed and approved by the DEQ. The attached guidance document *"Hazardous Waste Contingency Plans"* from the Indiana Department of Environmental Management includes the criteria on Page 2 for when a contingency plan will be implemented. RAAP will develop and submit numerical limits for the various waste streams and/or components of waste streams which fit the criteria described in the guidance.

Radford Response (1-2), (Response received on 3/6/2015) – See prior discussion on this issue under NOD 2.34(a).

DEQ Response (1-2) – DEQ believes that RAAP has incorrectly cited the comment response to 2.34(a) instead of the correct 2.34(b). Regardless as states in the response to 2.34(b) DEQ will evaluate the revised language submitted by RAAP to determine if the comment is satisfied.

44. **Attachment II.E, Table II.E-4, Spill Response Measures,** The submitted permit language for the spill response measures has struck out the language referring to the test method to determine whether contaminated materials are reactive. The following language shall be included in the revised permit application:

"Explosion fragments and materials and possible propellant-contaminated materials and soils will be analyzed using SW846 Method 8332 for explosives and 8330 for nitroglycerine. If the analyses indicate the materials are reactive, they will be handled as hazardous waste. Hazardous soils and residual reactive wastes will be treated at the OB Ground or sent off-site for disposal. If the analyses indicate that the materials are non-reactive, they will be disposed of as solid waste.

Radford Response (1-1), (Response received on 12/11/2014) - The changes made to this table were consistent with those made, reviewed, and approved for our facility's post-closure care permit, as we wanted the spill response measures to be identical regardless of the RCRA location in which they were being implemented. As this level of detail was sufficient for the post-closure care permit, we expect it to be sufficient for this permit.

DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the PCC permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP discussed that their internal laboratory does not use SW-846 methods for reactivity testing. They use an internal procedure that is currently undergoing VELAP review. Therefore, the referenced text should refer to either the SW-846 procedures or the internal RFAAP procedures.

DEQ was satisfied with this discussion and requested the text be revised accordingly. RFAAP will modify the text to reference both the SW-846 procedures and the internal procedures.

DEQ Response (2-2) – The DEQ will evaluate the revised language submitted to determine if it satisfies the comment made.

45. **Attachment II.E, Appendix A, RFAAP Disaster Control Plan and RFAAP Plant Protection Plan,** The submitted permit application has struck out Appendix A which contains the RFAAP Disaster Control Plan and the RFAAP Plant Protection Plan. Both of these plans are required to ensure protection of human health and the environment by mitigating any potential releases cause by a catastrophic malfunction in the plant's operations. The revised permit application will include Appendix A.

    Radford Response (1-1), (Response received on 12/11/2014) - The text in question made reference to non-regulatory based emergency response plans. These plans were not designed to specifically manage environmental incidents resulting from the release of hazardous waste to the environment. Therefore, the references to and inclusion of them or their outlines in the appendices were removed from this document. When necessary, information from these plans was added to the Contingency Plan to make an accurate accounting of emergency management for hazardous waste releases.

    In regards to the specific reference to the SPCCP - 40 CFR § 264.52(b) permits facilities to utilize the SPCC plan (or another emergency or contingency plan) to meet the requirements of this section. However, it does not require incorporation of such plans into the Contingency Plan if the owner or operator wishes to develop and rely upon a separate plan for meeting this requirement. In consideration of our facility's hazardous waste management practices, we have opted to develop a separate, standalone plan for management of hazardous waste emergencies

    DEQ Response (1-1) – RAAP will revise the language of the permit application to include the standalone plan for management of hazardous waste emergencies and submit to DEQ for review and approval in order to satisfy the comment made. DEQ will take another look at the Contingency Plan and see if any required information is missing as a result of the removal of the non-RCRA documentation.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained their concerns about incorporating non-RCRA required plans into the Contingency Plan. Detail that was included in these plans concerning hazardous waste emergencies was added to the Contingency Plan in place of the struck references.

DEQ Response (1-2) – Upon further review of the contingency plan and the contingency plan and the struck Appendix A, RFAAP Disaster Control Plan and RFAAP Plant Protection plan the DEQ maintains that an adequate disaster and plant protection plan is necessary in order to minimize the possibility of a release of hazardous waste which may result in harm to human health or the environment. RAAP's objections to the inclusion of the plan into the permit have been noted and the revised language in the contingency plan which was referenced in the second response to this NOD item may satisfy the requirement. RAAP will submit the current versions of the RFAAP Disaster Control and RFAAP Plant Protection plans with the revised permit application and DEQ will evaluate the plans against the submitted permit language to determine if the submitted language is adequately protective of human health and the environment.

46. **Attachment II.F, Sections II.F.2a.2.1 and II.F.2b.2.2., General RFAAP Setting and Incinerator Conditions,** The submitted permit language has struck out two sections which detail the geologic conditions of the facility. This language is standard in all closure plans in RCRA permits and shall be included in the revised permit application/

Radford Response (1-1), (Response received on 12/11/2014) -We have reviewed the requirements for Closure Plans provided in 40 CFR § 264.112(b) and cannot find a requirement to include this information in the plan. Please provide a regulatory citation for this requirement so that we can insure the information provided is consistent with that which is required

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. As this information was included in the previously issued permit, which was reviewed and approved of by RAAP before issuance, please provide a technical explanation as to why this information is inappropriate for inclusion in the closure plan which does not rely on a specific regulation requiring it. DEQ will review the provided rationale and evaluate the appropriateness of inclusion of the struck language at that time.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP could not locate a regulatory requirement for this information and requested that one be provided if available. DEQ cited RCRA Omnibus authority as the driver (it is included in all VA Contingency Plans). RFAAP will provide a brief description of geologic conditions in the permit application.

DEQ Response (1-2) – The DEQ will evaluate the revised language submitted to determine if it satisfies the comment made.

47. **Attachment II.F, Section II.F.2a-c, Pages II.F-8 through II.F-10, Hazardous Waste Characteristic Analysis,** The permit language as submitted does not characterize the waste properly and the previous permit language should be included in Sections II.F.a-c. The Incinerator Maximum Hazardous Waste Inventory Section has been revised to remove the placard stating the maximum amount of hazardous waste permitted in the grinder building, which should remain as an administrative control and the language detailing methods of how waste will be treated before closure. The language will remain in the permit as is unless the permittee can provide a justification to the DEQ as to why it should be removed. Additionally language which details the potential maximum quantity of hazardous waste, 6,710 pounds, will be included in the revised section submitted.

Radford Response (1-1), (Response received on 12/11/2014) - The information that was struck from this plan is duplicated in the Waste Analysis Plan in Attachment II.A. There is no need for this plan to serve as a standalone document. Therefore, duplication of information in this plan that can be found elsewhere in the application is not appropriate.

DEQ Response (1-1) – While the closure plan is meant to be a standalone document in RCRA permits the DEQ will accept RAAP's rationale to remove the language provided that explicit reference to the information is contained in the revised permit application for this section.

Radford Response (2-1), (Response received on 12/11/2014) - The maximum quantity of waste allowed in the Grinder Building is provided in the first sentence of the second paragraph in Section II.F.2c: "The actual maximum quantity of reactive material (waste energetics) allowed in the Grinder Building at any time is 5,000 pounds per building explosive design criteria." The descriptions referring to the amount of waste that may be stored in the slurry tanks was irrelevant because the maximum quantity for the building was already specified at 5,000 pounds. This 5,000 pounds includes any energetic material in the building. Therefore, the maximum quantity of waste that could be stored in the building is 5,000 pounds, regardless of whether it is in tubs or in the tanks. The reference to 6,719 pounds, exceeds allowable criteria and is therefore irrelevant and misleading.

DEQ Response (2-1) – While the DEQ understands RAAP's position that the information previously stated in the permit for the maximum amount of hazardous waste which can be stored in the building was incorrect and has revised that number to 5,000 pounds at any time the facility has not responded as to whether the placard on the building will remain. DEQ would like a revised placard to be placed on the building's entrance as an administrative control.

Radford Response (2-2), (Response received on 3/6/2015) – RFAAP explained that the referenced placard is required by the Department of Defense Explosive Safety Board (DDESB), not RCRA. By incorporating a reference to this placard in the Permit, it makes that placard a RCRA requirement. This seemed unnecessary for ensuring Permit compliance and unnecessarily increased the compliance burden.

DEQ concurred with RFAAP's concerns and determined that the struck reference can be removed.

DEQ Response (2-2) – This satisfies the comment.

48. **Attachment II.F, Section II.F.4b, Closure Alternatives for Structures,** The submitted application language has struck out the following, which shall be included in the revised permit application:

    "Due to the types of wastes treated it is likely that much of the waste handling equipment would require handling as a hazardous waste."

    Radford Response (1-1), (Response received on 12/11/2014) - We reconsidered this statement and deemed it to be incorrect. The waste materials stored in the tanks and pumped through the slurry lines are actually not reactive at the levels typically used during normal operations. They are considered reactive out of an abundance of caution. (While the propellant itself is reactive, addition of water to it at the quantities used during normal operation makes it not reactive or at least, non-detonatable.) Therefore, it is entirely possible that significant portions of the waste handling equipment would not be hazardous.

    DEQ Response (1-1) – The DEQ concurs with RAAP's response and will allow the language to be removed provided that language is added which states the equipment will be determined to be hazardous or non-hazardous solid waste by using data from wipe samples before disposal.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP reconsidered the description provided and deemed it to be incorrect, explaining that the waste materials stored in the tanks and pumped through the slurry lines are actually not reactive at the levels typically used during normal operations. They are considered reactive out of an abundance of caution. (While the propellant itself is reactive, addition of water to it at the quantities used during normal operation makes it not reactive or at least, non-detonatable.) Therefore, it is entirely possible that significant portions of the waste handling equipment would not be hazardous.

    DEQ was satisfied with this technical justification and removal of the reference language.

    DEQ Response (1-2) – Solid waste generated from the treatment, storage or disposal of a hazardous waste is presumed to be a hazardous waste under 40 CFR Section 261.3(c)(2)(i). Please include language in the revised permit application which will explain that RAAP will assume the waste handling equipment is a hazardous waste until sampling data can refute the presumption.

49. **Attachment II.F, Section II.F.5a, Pages II.F-15 through II.F-17,** The revised language is not sufficient to demonstrate compliance with the requirements of 40 CFR 264.112(b)(3). The language removed from this section in the red-line/strikeout version of the permit application will be kept in the permit condition language.

Radford Response (1-1), (Response received on 12/11/2014) - The only significant detail removed from Section II.F.5a was that pertaining to the procedure for mixing sawdust with the liquid waste to make a more solid material suitable for shipping. All other modifications to this section involved minor wording changes or eliminated duplication of information within this section or between this section and other sections. This detail described the steps necessary to "package" the waste for shipment and disposal at a third party facility. As of this time, the facility that will take the waste has not been identified, nor will it be identified until such time that unit closure is a reality. As a result, we are unaware of the specific requirements that facility will impose on the wastes that we ship them. Therefore, we removed this detail, as it may change with direction provided from the receiving facility.

DEQ Response (1-1) – The procedure described for removing water or free liquids from the slurry is also stated as a preparation for disposal in the open burning grounds or manifested for off-site disposal and not just off-site disposal only. RAAP may submit what a potential off-site facility's shipping requirements are at the time of closure but since the waste will most likely be treated in the facility's open burning grounds the procedural steps struck out shall be included in the revised language submitted to DEQ. Regarding the other struck out language if RAAP's intent was to eliminate duplicative language an explicit reference to the location of this language in other sections of the revised permit application must be included in order to be deemed acceptable by the DEQ.

Radford Response (1-2), (Response received on 3/6/2015) – The referenced language described the steps necessary to "package" the waste for shipment and disposal at a third party facility. As of this time, the facility that will take the waste has not been identified, nor will it be identified until such time that unit closure is a reality. As a result, RFAAP cannot be certain of the specific requirements that the receiving facility will impose on the wastes that we ship them. Therefore, we removed this detail, as it may change with direction provided from the receiving facility or the US Army command group.

DEQ was satisfied with this response but requested that some general language concerning packaging and shipping of closure wastes be added to the plan. RFAAP to add general information concerning waste packaging for shipment to the closure plan. Language should indicate that materials will be packed according to the requirements of the receiving facility.

DEQ Response (2-2) – The DEQ will evaluate the revised language submitted to determine if it satisfies the comment made.

50. **Attachment II.F, Sections II.F.5b, II.F.5c and II.F.5d, Pages II.F-17 through II.F-25,** The revised permit language is not sufficient to demonstrate compliance with the standards in 40 CFR 264.112(b)(4). The language referencing the Waste Analysis Plan, analysis for toxicity and reactivity and disposed of off-site at a RCRA permitted facility, analysis using SW 846 methods and the changing of the number of wash water samples from five to three shall remain in the permit.

Radford Response (1-1), (Response received on 12/11/2014) - In general, we request a more specific notation of the problems with this section - referencing specific paragraphs on specific pages. Several of DEQ's comments above could reference more than one area of the markup. The area of the markup that is referenced could affect our response to this comment. For those comments that we were able to isolate (or at least think we were able to isolate to a specific incidence), we offer the following. (See elsewhere for specific items in light red area).

DEQ Response (1-1) – This comment was made in response to the language RAAP has struck out in their initial permit application referencing the Waste Analysis Plan, analysis for toxicity and reactivity and disposed of off-site at a RCRA permitted facility, analysis using SW 846 methods and the changing of the number of wash water samples from five to three in Sections II.F.5b, II.F.5c and II.F.5d on Pages II.F-17 through II.F-25. The information removed from the permit language is necessary to satisfy the regulatory requirement cited in the original comment. If RAAP needs more guidance on how to satisfy the comment the DEQ will provide it.

Radford Response (1-2), (Response received on 3/6/2015) - RFAAP requested more information on the specific deficiencies that DEQ identified, as the NOD was written more generally. DEQ agreed to provide this information.

DEQ Response (1-2) – DEQ has reviewed the section and has determined that the comment is satisfied if the language changes detailed in parts 2-4 of this comment are made to the language of the revised permit application.

Radford Response (2-1), (Response received on 12/11/2014) - The references to incinerator ash, scrubber sludge, and filter bag disposal that were modified presumes that the ash, sludge, and filter bags would be hazardous for either toxicity or reactivity. If the analysis of the waste shows it to be non-hazardous, then disposal at a RCRA landfill would represent an unnecessary cost. If a non-hazardous solid waste, a RCRA landfill is not necessary.

DEQ Response (2-1) – The struck language from the permit application is necessary to make the determination as to whether the incinerator ash, scrubber sludge, and filter bags are hazardous or non-hazardous solid waste. While disposal at a Subtitle C permitted landfill may not be appropriate for all wastes generated from the thermal treatment process that determination will be made during closure using the appropriate testing methods described in this section, which have been struck out and will be included in the revised permit application.

Radford Response (2-2), (Response received on 3/6/2015) - DEQ also requested that language concerning waste determinations be added to make it clear that hazardous waste will not be sent to a solid waste landfill. RFAAP will add this statement. RFAAP to add language indicating that a hazardous waste determination will be made at the time of closure.

DEQ Response (2-2) – This response satisfies the comment made.

Radford Response (3-1), (Response received on 12/11/2014) - The existing WAP does not describe the sampling procedures for process residues, such as incinerator ash, scrubber water, filter bags, or packing material. Therefore, referencing that plan for a description of sampling methods is not appropriate. Recognizing this, we modified the descriptions in the Closure plan to provide the necessary descriptions. Furthermore, the methods specified in the WAP for analyzing the waste feed samples are not necessarily appropriate for analyzing the residue samples. Many of the methods used for analyzing the waste streams are specific towards energetics and refer to the onsite procedures that are used for these wastes. These samples would be analyzed offsite by a commercial laboratory and, therefore, the site-specific methods specified in the WAP would again, not be appropriate.

DEQ Response (3-1) – Please provide a technical explanation as to why the waste residues should not be tested in accordance with the waste streams included in the WAP. While the DEQ agrees that the sampling methods for material potentially contaminated with hazardous waste such as the filter bags and/or packing material may not be appropriate and testing methods specific to these materials should be performed, the incinerator ash and scrubber water have the potential to be classified as hazardous waste and treated as such. Additionally please provide an explanation as to why the sampling would be performed at an off-site commercial laboratory when, given the nature of the facility, the DEQ would expect RAAP to have the necessary equipment on-site to be able to perform the laboratory testing themselves.

Radford Response (3-2), (Response received on 3/6/2015) – RFAAP explained that residue analysis will likely be looking for considerably lower concentrations of pollutants than does RFAAP's normal waste analysis. Therefore, the procedures used by the internal laboratory for waste analysis may not be appropriate. Furthermore, offsite analysis will likely be used instead of the internal laboratory due to turnaround times, capabilities, etc. No further action required regarding waste residue analysis

DEQ Response (3-2) – This response satisfies the comment made.

Radford Response (4-1), (Response received on 12/11/2014) - We request further information from DEQ on the necessity of collecting five wash water samples in place of three wash water samples. Most RCRA closure plans that we surveyed use the rule of three - three rinses, three samples, etc. If there is guidance available that specifies five samples instead of three samples, please direct us to this guidance so that we can evaluate its applicability to our facility.

DEQ Response (4-1) – The reasoning behind requiring 5 samples to be collected instead of three is that statistical non-parametric tests are unable to identify the differences between 2 samples if a sample size of less than 5 is used. If RAAP requires a more in depth explanation of the sample size requirement they may contact the RCRA division of DEQ and speak to the statistician regarding the importance of sample sizes in statistical analysis.

Radford Response (4-2), (Response received on 3/6/2015) – DEQ did request that five rinse samples be collected instead of the three that were specified. RFAAP understands that this request is based on statistical significance and will make the requested modification. RFAAP to change rinseate samples to five and to add a sentence concerning waste determinations.

DEQ Response (4-2) – This response satisfies the comment made.

51. **Attachment II.F, Sections II.F.5b, Pages II.F-18 through II.F-20,** The revised permit language is not sufficient to demonstrate compliance with the standards in 40 CFR 264.112(b)(4). The language referencing the Waste Analysis Plan, analysis for toxicity and reactivity and disposed of off-site at a RCRA permitted facility, analysis using SW 846 methods and the changing of the number of wash water samples from five to three will remain in the permit.

    Radford Response (1-1), (Response received on 12/11/2014) - This comment appears to duplicate the prior comment. If it is intended to refer to something different, please clarify.

    DEQ Response (1-1) – This comment was made in response to the language RAAP has struck out in their initial permit application and is specific to the pages of the application which are identified in the comment. The information removed from the permit language is necessary to satisfy the regulatory requirement cited in the original comment. If RAAP needs more guidance on how to satisfy the comment the DEQ will provide it.

    Radford Response (1-2), (Response received on 3/6/2015) – This was determined to be a duplicative comment.

    DEQ Response (1-1) – This will satisfy the comment.

52. **Attachment II.F, Section II.F.5e, Site Restoration, Page II.F-25,** The submitted language has struck out the following language, which shall be included in the revised application:

    "Additional constituents may be added to the analyses at the time of closure, pending VDEQ approval."

    Radford Response (1-1), (Response received on 12/11/2014) - We will add the requested language back into the application.

    DEQ Response (1-1) – This will satisfy the comment.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP will add the requested language to the Permit application.

    DEQ Response (1-2) – This will satisfy the comment.

53. **Attachment II.F, Section II.F.5e, Post-Closure Care And Groundwater Monitoring, Page II.F-26,** The submitted language has struck out the following language, which shall be included in the revised application:

    "Section 9.0 of this Closure Plan addresses the permit modification process in general that would be necessary to amend the Closure Plan in accordance with 40 CFR 264.112(c)."

    Radford Response (1-1), (Response received on 12/11/2014) - In reviewing this comment, we suspect that DEQ was referring to Section II.F.6 on page II.F-27. Assuming this is correct, we will revise the application as requested.

    DEQ Response (1-1) – RAAP is correct in identifying the incorrect citation. Revising the intended language of Section II.F.6 on page II.F-27 will satisfy the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) - RFAAP believes that the NOD contains an erroneous reference and requested clarification before making the change. DEQ will confirm the reference for the comment. RFAAP will review the requested language after confirmation from DEQ.

    DEQ Response (1-2) – RAAP is correct in their assessment of the incorrect citation. The comment will be satisfied if the language changes are made to the correct Section II.F.6 on page II.F-27.

54. **Attachment II.F, Section II.F.5b, Decontamination Verification,** The language in this section referring to sampling locations shall include the following: Oversize Propellant Hopper, Metal Containing Propellant Hopper, Bucket Conveyer and all Associated Piping.

    Radford Response (1-1), (Response received on 12/11/2014) - We will add the requested language back into the application.

    DEQ Response (1-1) – This action will satisfy the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP concurs that these items will likely be contaminated and sampling of them is prudent. RFAAP will add the requested language to the Permit application.

    DEQ Response (1-2) – This action will satisfy the comment made.

55. **Attachment II.G, Section II.G.4, Page II.G.3,** The revised permit language is not sufficient to demonstrate controlled entry to the facility consistent with the requirements of 40 CFR 264.14(b)(2)(ii). The language which was struck out of the revised section of the permit application shall be included to ensure compliance with the standard.

Radford Response (1-1), (Response received on 12/11/2014) - The language contained in the first paragraph of this section was modified to match that submitted and approved for the PCC permit. We then added a second paragraph that pertains to entry control measures in place at the incinerator, actually increasing the level of detail from that provided in the post-closure care permit. Considering the desire for consistency in the various permits, we request further clarification as to why this language was sufficient for the post-closure care permit and is not sufficient for this permit.

DEQ Response (1-1) – The current permit application being reviewed is for an operating unit treating hazardous waste managed under the RCRA permitting program. The differences in the nature of hazards that may occur between an operating unit treating hazardous waste, such as the incinerators in this specific permit, and a unit in which hazardous waste was released and is now being monitored and controlled, as in the Post Closure Care permit referenced by the facility's response, are dramatic. Regardless of whether the information should have been included in the Post Closure Care permit the information will be included in the operating unit's revised permit application as it is required by regulation. If the permittee is confused as to the regulatory requirements they may contact the RCRA permitting division of DEQ for clarification.

Radford Response (1-2), (Response received on 3/6/2015) - RFAAP reviewed the text and could not identify any information that was missing per the regulatory citation. DEQ agreed to provide a secondary review of this section. DEQ will review the plan and provide more specific information on what is required to satisfy the provision.

DEQ Response (1-2) – DEQ has evaluated the language again at RAAP's request and again comments that the language as submitted is deficient and does not demonstrate compliance with the controlled entry requirements in 40 CFR 264.14(b)(2)(ii). In addition the DEQ has found the language to be deficient in demonstrating compliance with 40 CFR 264.14(b)(2)(i) as well. For clarity DEQ is including the citations language as follows:

"§264.14 Security.
b) Unless the owner or operator has made a successful demonstration under paragraphs (a) (1) and (2) of this section, a facility must have:

(2)(i) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and

(ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility)."

To satisfy the comment RAAP will include the following language which was struck from the permit in the initial application. This language describes in detail the security fence and how access it controlled by on-site security guards:

"The outer perimeter of the installation is enclosed with a FE-1 five-strand barbed wire fence. Security personnel at installation entrances record the name and other pertinent data of each person not possessing a Radford Army Ammunition Plant personnel identification badge.

Seventy-two percent of Radford Army Ammunition Plant's acreage is enclosed in three limited areas. All propellant manufacturing, storage, testing and support activities except administration are included in limited areas. There is a six-foot high cyclone fence (FE-6 or FE-7) with two feet of barbed wire on top that surrounds limited areas.

The six active entrances into the limited area are controlled by armed Security Guards. Entering persons must first be authorized by the Plant Manager, Commander, or their designated representatives and then processed by the security personnel."

56. **Attachment II.H, Section II.H.1, Page II.H-1,** The revised permit language does not document whether the affected units are located within a 100 year flood plain as required by 40 CFR 264.18(b). The language should be revised to include the following language from the previous permit:

    "The foundations of Building 442 (tanks) and Buildings 440 and 441 (incinerators) are located within the 100-year floodplain. However, the operating floors of the buildings are above the 100-year flood plain elevation."

    Radford Response (1-1), (Response received on 12/11/2014) - The requested language is contained within the Flood Plan in the exact wording requested by DEQ. It was simply moved to Section II.H.2 to add to clarity of presentation and remove duplication of information.

    DEQ Response (1-1) – The language identified by RAAP has been found and is sufficient to satisfy the comment made.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP directed DEQ to the location of the requested information, which had been relocated.

    DEQ Response (1-2) – The language identified by RAAP has been found and is sufficient to satisfy the comment made.

57. **Attachment II.H, Section II.H.2, Page II.H-1,** The submitted language needs to document the actual heights of units treating or storing hazardous waste at the facility. The following language which was struck out of the previous permit for the submitted application should be included:

    "The 100-year flood elevation is 1700 ft. MSL at the incinerators. The lowest entry point is at Building 442 at 1703.83 ft. MSL. The incinerator kilns are above 1700 ft. MSL."

Radford Response (1-1), (Response received on 12/11/2014) - Do not have any basis for the numbers provided in the previous permit application, therefore they were removed. We are going to resurvey the units and obtain actual elevations. Those elevations will be referenced, as appropriate, in revised application.

DEQ Response (1-1) – The actions proposed will satisfy the comment. The survey numbers will be reviewed when a revised application is submitted.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that they could not locate any drawings or data to substantiate the elevation data provided. Therefore, they removed the data. RFAAP is going to resurvey the units and obtain actual elevations. Those elevations will be referenced, as appropriate, in revised application. RFAAP to add equipment elevations to the permit application after the equipment survey is complete.

DEQ Response (1-2) – The actions proposed will satisfy the comment. The survey numbers will be reviewed when a revised application is submitted.

58. **Attachment II.H, Sections II.H.3, II.H.4 and II.H.5, Pages II.H-1 through II.H-4,** The permit language as written in Section II.H.3 for the flood proofing is not adequate to ensure washout of the hazardous waste containment areas will be prevented. The permittee should revise the language to address at what water level the proposed barricades at the culverts will be raised, the facility alarm procedure for personnel to recognize the barricades will be implemented, the approximate time it will take facility personnel to raise the barricades and whether any additional flood proofing at the hazardous waste treatment and storage units will be employed if the barricades do not function as designed.

    The permit language as submitted for Sections II.H.4 and II.H.5 is not adequate to ensure protection of the hazardous waste treatment and storage units in the event of a 100 year flood. The water level, described as 1695 ft at the New River Bridge, at which information will be collected and logged, in Section II.H.4, and at which the flood plan will be implemented, in Section II.H.5, is too close to the 100 year flood plain level of 1700 ft to ensure the flood plan procedures will have adequate time to be implemented. The permit language should be revised to lower the water level threshold to a level which allows the facility adequate time to implement the flood plan procedures, recommended at 1690 ft.

    The permit language for Section II.H.4 regarding the information which will be required to be collected and logged by the facility from “local officials” is not adequate to demonstrate compliance with the conditions in this Module. The revised permit language shall be struck and the information collected and logged by the facility included in the original permit will be added.

Radford Response (1-1), (Response received on 12/11/2014) - Descriptions provided on blocking of the culverts within the referenced text were not substantially changed from the prior version of the permit. Please note that although it is not explicitly stated, the text of the first paragraph on page II.H-4 indicates that if "the New River height at the River Bridge reaches 1,696 ft MSL…[BAE] will institute the flood protection plan for the permitted storage and treatment areas." Considering that installation of these barricades is part of this flood plan, this statement appears to provide some of the detail that was requested.

DEQ Response (1-1) – Per the conversation in the meeting with RAAP staff on December 10-11th regarding the NOD and specifically this comment RAAP will provide documentation proving the current flood plan measures have been adequate to prevent flooding of the unit. Once this documentation has been reviewed and deemed adequate to satisfy the concerns DEQ has this comment will be determined to be satisfied.

Radford Response (1-2), (Response received on 3/6/2015) - RFAAP indicated that the descriptions provided in the flood plan were not substantially changed from the prior version of the permit and requested more detail on specific inadequacies. DEQ agreed to provide a second review of this plan and more specifically address any inadequacies in procedures

DEQ Response (1-2) – DEQ has reviewed the language again at RAAP's request and has determined, as indicated by the earlier DEQ responses to this comment, that once RAAP has sufficiently demonstrated that the current actionable level of the New River included in the permit allows for enough time for the flood plan procedures to be protective of the hazardous waste treatment and storage units that the comment will be satisfied.

Radford Response (2-1), (Response received on 12/11/2014) - In the prior permit, DEQ agreed that the notification level of 1,697 feet at the River Bridge was a sufficient point in time for activation of the flood protection plan (see unmodified text on page II.H-3). Since development of that permit and several implementations of this flood protection plan, we have never experienced situations at the incinerators in which flooding of the area resulted in a loss of hazardous waste to the environment. The action level of 1,697 feet has been demonstrated protective multiple times. Despite this, we slightly reduced this level in this modification to provide consistency between the Utilities Division point of contact with local authorities and the flood preparation activation point

DEQ Response (2-1) – As stated in the previous DEQ response in this comment, per the conversation in the meeting with RAAP staff on December 10-11th regarding the NOD and specifically this comment RAAP will provide documentation proving the current flood plan measures have been adequate to prevent flooding of the unit. Once this documentation has been reviewed and deemed adequate to satisfy the concerns DEQ has this comment will be determined to be satisfied.

Radford Response (2-2), (Response received on 3/6/2015) -RFAAP questioned DEQ's desire to further restrict the action level for the flood protection plan, considering that the level provided in the plan (1,697 feet) has proven protective on multiple occasions in the past. Recognizing this, DEQ agreed that the current level could remain provided that RFAAP submits documentation demonstrating its effectiveness with the NOD response.

DEQ Response (2-2) – DEQ concurs that the comment will be satisfied once RAAP has submitted documentation to support the protectiveness of the current actionable level of the New River in a potential flood scenario.

59. **Module III, Section III.C.2, Emission Control Technology, Page III-6,** The proposed language has struck out a reference to the "Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure" attached as Attachment III.B. The revised application shall include the language as well as the latest verification report as Attachment III.B.

    Radford Response (1-1), (Response received on 12/11/2014) - Please note that in reviewing this comment, we found an error in the regulatory reference in this section. The Procedure T method referenced in this section is contained in 40 CFR Part 51, Appendix M. This document is updated each year. Including it in the Permit therefore requires a permit modification each year (or at least should in principal). Simply referencing it seems to be a more appropriate way to handle this. Additionally, what is the basis for requiring it once per year if there are no design or process changes made to the building?

    DEQ Response (1-1) – Referencing the Procedure T method with the correct citation will be sufficient to satisfy the comment. The procedure is required once a year regardless of design or process changes to the building because the building is exposed to the elements and quite simply will degrade over time without proper maintenance. The Procedure T method can be considered an annual check to ensure this maintenance is being performed and the building is still a viable control method of fugitive emissions from the process.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP questioned the need for including the verification report in the permit application if it is updated each year.

    DEQ wishes to review this report each year after it is completed, however, they agreed that report does not need to be included in the Permit itself. This will relieve the necessity for modifying the permit annually to reflect the latest report. If the annual analysis ever determines that the building does not meet the Procedure T criteria, this topic will be revisited.

    DEQ Response (1-2) – This comment is satisfied.

60. **Module III, Section III.C.3, Reporting Requirements., Page III-7,** The submitted language has changed the reporting period from once every three years to once every permit term, which is not acceptable to determine compliance with the permit terms. The revised permit language shall be as follows:

"Pursuant to 40 CFR 270.32 (b)(2), the Permittees shall submit to the Department for review a report that meets the requirements of Attachment III.C once per permit term every 3 years from the effective date of this permit. The report shall be prepared according to the scope of work provided in Attachment III.C and any other criteria required by the Director"

Radford Response (1-1), (Response received on 12/11/2014) – The frequency of this requirement presents a significant regulatory burden. Furthermore, the basis for the requirement in general is not clear. We request that DEQ provide further direction on the regulatory basis for this requirement and the specified frequency.

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. In the meeting between DEQ and RAAP a compromise of twice every permit term, once every five years, was suggested as an alternate between three times a permit term and once a permit term. RAAP may either accept this compromise value or accept the current value.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP questioned the basis for the 3-year scope of work control device study for tank emission controls, arguing that the frequency was too excessive. DEQ asked if the current frequency is presenting a burden to the facility and explained that moving from once every three years to once per permit terms results in a frequency reduction of 2/3 from the prior Permit and seemed excessive. DEQ asked if RFAAP would be okay with a requirement of once every 5 years. RFAAP found this acceptable.

RFAAP will modify the language to reflect that the control device study will be updated once every five years. RFAAP is currently requesting quotes from qualified consultants to perform the study.

DEQ Response (1-2) – This comment is satisfied.

61. **Module III, Sections III.D and D.1, Additional Information and Revisions and Updates, Pages III-7 and III-8,** The submitted language has struck out the last paragraph of the Additional Information and Revisions section, which references the Operating Procedures listed on Table III-1, and has entirely struck out the Revisions and Updates sections. The revised permit application will incorporate the language specified in this comment including Table III 1.

Radford Response (1-1), (Response received on 12/11/2014) - There is no requirement that we could locate within Part 270 or Part 264 to require the inclusion of standard operating procedures. (See prior response)

DEQ Response (1-1) - 40 CFR 270.32(b)(2), commonly known as the RCRA Omnibus Authority, allows the permitting agency, in this instance DEQ, to include any applicable requirements deemed necessary to ensure protection of human health and the environment. After discussion with the facility the DEQ will accept copies of the current SOP with the revised permit application for review but not inclusion into the permit document itself as long as the SOPs are deemed adequate by the DEQ

Radford Response (1-2), (Response received on 3/6/2015) – See discussion on including SOPs and their references under NOD 1.10.

DEQ Response (1-2) – DEQ will review the current SOPs for technical adequacy when submitted by RAAP with the revised permit application. Submission of these SOPs, but not inclusion in the final permit document, will satisfy the comment.

62. **Module III.2, Section III.2.B, Permitted and Prohibited Waste Feed, Page III.2-1,** The submitted language has struck out the last two conditions in section III.2.B which requires only slurried waste and waste generated at the facility to be incinerated at the facility. These conditions will be kept in the revised permit application with the additional language that waste from the NRU may be incinerated. Addition of the NRU language is contingent on the DEQ approving waste from the NRU being accepted at the RAAP facility.

    Radford Response (1-1), (Response received on 12/11/2014) - Contingent upon our review of the revised language DEQ proposes to address the NRU and tenant waste incineration, we have no objection to this comment.

    DEQ Response (1-1) – Currently tenant waste is only addressed in the class 3 modification to the Incinerator permit. Wastes from off-site, such as the NRU, must go to a permitted unit for container storage which RAAP does not currently possess.

    Radford Response (1-2), (Response received on 3/6/2015) – Discussion on this issue concerned interpretation of the military munitions rule and the NRU wastes. See prior discussions on NRU waste management provided with NOD 2.7.

    DEQ Response (1-2) – The comment is satisfied in regards to tenant waste being treated in the incinerator but is unsatisfied for wastes from the NRU. The questions raised by DEQ detailed in the response to comment 7 of this section will need to be answered by RAAP.

63. **Attachment III.A, Section III.A.7, Test Methods and Procedures, Page III.A-5**, The permit application language has been revised to state the determination of the organic concentrations of the waste stream in each piece of equipment has been made using process knowledge in Section III.A.1. There is no demonstration of process knowledge described in Section III.A.1 and as such the permit application language in Section III.A.1 should be revised to include language regarding process knowledge determination and the original language in Section III.A.7 will be retained in the permit document should process knowledge be deemed insufficient for demonstrating compliance in the future.

Radford Response (1-1), (Response received on 12/11/2014) - The process knowledge utilized to reach this conclusion is described in the second paragraph of III.A.1. This is a fairly simple but conservative calculation. Please provide information on the additional information that is required in addition to what has already been specified here. If DEQ wishes, we can add a reference to this paragraph in Section II.A.7.

DEQ Response (1-1) – The process knowledge described in the second paragraph of A.1 is not sufficient to replace the testing methods which have been struck out. The permittee will submit process knowledge which is equivalent to the testing procedures struck out of the permit application or the testing methods will remain in the permit as an applicable requirement.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained the methodology that was used and pointed DEQ to the description in the application. DEQ was satisfied with this response.

DEQ Response (1-2) – This comment is satisfied.

64. **Attachment III.2.A, Table III.A-1, Pages III.2.A-8 through III.2.A-18,** Table III.A-1 as submitted needs to be revised to include the frequency of monitoring for equipment which does not have a monitoring frequency included in the table.

Radford Response (1-1), (Response received on 12/11/2014) - We expect that the comment should actually refer to Attachment III.A. Assuming this is correct, the only frequencies not specifically defined in the table are those applicable to LDAR for connectors. This frequency is not set at any regular periodic interval, but instead, as discussed in the first paragraph on page III.A-4, is only required if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

DEQ Response (1-1) – RAAP is correct regarding the applicable citation should be Attachment III.A. However not proposing a monitoring frequency or schedule does not satisfy the comment and relying solely on happenstance to identify a leak does not meet the regulatory requirements. RAAP will submit a revised table which includes an inspection frequency or the comment will be included in another Notice of Deficiency.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that per RCRA Subpart BB requirements, this frequency is not set at any regular periodic interval, but instead, as discussed in the first paragraph on page III.A-4, is only required if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. RFAAP will add a footnote to the referenced table explaining this. No further change to frequency of monitoring is required.

DEQ Response (1-2) – This comment is satisfied.

65. **Attachment III.1.B, Section III.1.B3.a, Tank Management Practices, Page III.1.B-3,** The submitted language at the end of the first paragraph has removed the reference to the VHWMP requirements. The revised permit application shall include the reference to the VHWMP.

    Radford Response (1-1), (Response received on 12/11/2014) – We request DEQ provide a specific regulatory citation (or range of citations) that are applicable rather than a broad reference to the VHWMP

    DEQ Response (1-1) – The permittee is responsible for complying with all applicable federal and state regulations regardless of their inclusion in a permit document, an example from an air permit would be compliance with a NESHAP standard which has yet to be included in the facility's Title V permit. Any "fog" of the compliance burden does not preclude the facility from knowing what regulations they are subject to and complying with those applicable requirements. The language will be included in the revised permit application.

    Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over non-specific references to regulatory requirements. However RFAAP agreed to reinstate the requested language. RFAAP will reinstate the referenced language.

    DEQ Response (1-2) – This comment is satisfied.

66. **Attachment III.1.C, Section III.1.C.3, Preventive Procedures Structures, and Equipment, Page III.1.C-3,** The submitted language cites Tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code", which have been superseded by Table 22.4.1.1.(a) in the 2012 version of the NFPA guidance. The revised permit application will incorporate Table 22.4.1.1(a) of the most current version of the NFPA guidance available.

    Radford Response (1-1), (Response received on 12/11/2014) - The applicable regulatory provisions (40 CFR § 264.198(b)) currently require compliance with the NFPA Flammable and Combustible Liquids Code, not the updated code referenced by DEQ. We will update this reference as appropriate once the prevailing regulatory language is updated to reflect this change. Altering this language at this time would be in conflict with the clear regulatory language provided in 40 CFR § 264.198(b). Furthermore, you cannot hold tanks that were designed and installed prior to promulgation of a standard to that standard.

    DEQ Response (1-1) – RAAP is responsible for making sure their tank systems are meeting the current NFPA regulatory standards, regardless of when the tank systems were installed. RCRA regulations do not provide for "grandfathering" of previously installed equipment, the DEQ believes RAAP may be confusing the RCRA standards with the ones found in the Clean Air Act which does allow for different requirements to be placed on sources which are either classified as existing or new. The permitted units must be able to meet the current standards in place or be retired with a system that can meet the requirements.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP expressed concern over holding already designed and installed tanks to a new design standard. (Basically, when a tank is installed, it is designed to the applicable standard at the time). DEQ questioned what the expected life of the current tanks is? RFAAP was not certain as the current tanks have demonstrated no sign of impending failure or mechanical stress. DEQ perceived the new NFPA standard to only be a minimal wording change from the prior standard and questioned whether the tanks would meet it regardless. They clarified that the old standard currently referenced in the RCRA provisions no longer exists.

RFAAP will review the new NFPA standard against the old NFPA standard and the materials handled in the tanks to determine if the tanks can meet (and have to meet) the new standard. If the new standard is just a minor wording change from the old standard and the evaluator deems this standard applicable to the materials managed in it, RFAAP will not oppose integrating it into the Permit.

DEQ Response (1-2) – This comment is satisfied.

67. **Attachment III.1.C, Section III.1.C.3.a, Management of Reactive Wastes in Tanks, Page III.1.C-3,** The submitted language has struck out the numerical reference to the percent volume of the waste slurry which will be tapped off and fed to the incinerator. The following permit language shall be submitted in the revised application as follows:

"When the incinerators are operation, a portion of this flow is directed through the pickup line and metering pump to the incinerator, with approximately 2-3% being tapped off and fed to the incinerator."

Radford Response (1-1), (Response received on 12/11/2014) - The hazardous waste incinerators operate in compliance with a maximum waste feed rate limit under the HWC MACT program. The percentage of the main slurry line that is tapped off and sent to the incinerators is irrelevant provided that this maximum waste feed rate limit is satisfied. The language requested for inclusion is not necessary to protect human health or the environment.

DEQ Response (1-1) – The numerical value for the maximum amount of waste being fed to the incinerators at any time is relevant for the short term emissions limits which will be evaluated during the revised risk assessment performed by RAAP and submitted to DEQ for review. As RAAP is not the permitting authority any determination of what is or is not protective of human health and the environment would not be an appropriate one for RAAP to make.

Radford Response (1-2), (Response received on 3/6/2015) – RFAAP explained that the hazardous waste incinerators operate in compliance with a maximum waste feed rate limit under the HWC Maximum Available Control Technology (MACT) program. The percentage of the main slurry line that is tapped off and sent to the incinerators is irrelevant provided that this maximum waste feed rate limit is satisfied. DEQ was satisfied with this response.

DEQ Response (1-2) – This comment is satisfied.

68. **Attachment III.2.A, Section III.2.A.1, Pages III.2.A-1 through III.2.A-9,** The revised permit application language has removed the description of the incinerator equipment and operations. While the permit states that compliance with 40 CFR Part 63 Subpart EEE The Hazardous Waste Combustor MACT, demonstrates compliance with the RCRA requirements for incinerators a change in the design of the incinerator may cause the emissions from the stack to exceed levels established by the risk assessment and therefore a permit modification shall be required if a physical change in the design of the incinerators is implemented. The language shall remain in the permit.

    Radford Response (1-1), (Response received on 12/11/2014) - We understand DEQ's point in regards to design changes and those changes that may warrant a permit modification or affect the risk assessment emission levels. However, the level of detail included in this section previously is inappropriate considering the switch to primary operation under HWC MACT. We will provide a revised description for DEQ's review.

    DEQ Response (1-1) – RAAP will submit a description of equivalent level of detail to the language currently included in the permit or the comment will remain unsatisfied. Deeming language as appropriate or not is not a decision the facility can make as DEQ is the permitting authority and has identified why the current language must remain in the permit. If the description provided is not to the level of detail as the current description the comment will remain unsatisfied and will be included in a follow up Notice of Deficiency.

    Radford Response (1-2), (Response received on 3/6/2015) – While RFAAP understands DEQ's concerns regarding design changes and permit modification, we do not concur that the level of detail previously included in this section previously is appropriate considering the switch to primary operation under HWC MACT. DEQ concurred that the 20 pages of equipment descriptions is likely not necessary but requested more than what was provided in the permit application. RFAAP will provide a revised description for DEQ's review. DEQ also requested a statement be added to the permit regarding notification procedures for changes in equipment design.

    RFAAP will provide a modified process description for DEQ's review. The Appendix to 40 CFR § 270.42 will be reviewed to help establish the appropriate level of detail.

    DEQ Response (1-2) – The DEQ will evaluate the revised language submitted to determine if it satisfies the comment made.