

AMERICAN ORDNANCE LLC
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA 52638

ENVIRONMENTAL NOISE MANAGEMENT PROGRAM (ENMP) PLAN

FOR THE

IOWA ARMY AMMUNITION PLANT

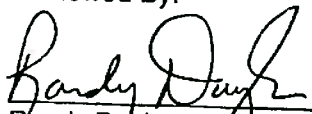
4 April 2018

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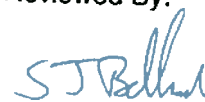
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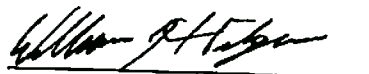
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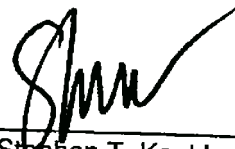


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GLOSSARY OF TERMS, ACRONYMS AND ABBREVIATIONS

GLOSSARY OF TERMS

Average Sound Level – the mean-squared sound exposure level of all events occurring in a stated time interval, plus ten times the common logarithm of the quotient formed by the number of events in a time interval, divided by the duration of the time interval in seconds.

C-Weighted Sound Level – a quantity, in decibels, read from a standard sound level meter with C-weighting circuitry. The C-scale incorporates slight de-emphasis of the low and high portion of the audible frequency spectrum.

Day-Night Average Sound Level (DNL) – the 24-hour average frequency –weighted sound level, in decibels, from midnight to midnight, obtained after addition of 10 decibels to sound levels in the night from midnight up to 7 a.m. and from 10 p.m. to midnight (0000 up to 0700 and 2200 up to 2400 hours)

Decibels (dB) – A logarithmic sound pressure unit of measure.

H.E. – high explosives

Land Use Planning Zone (LUPZ) – DNL noise contours represent an annual average that separates the Noise II contour from the Noise I contour.

Noise – any sound without value

PK15(met) – the maximum value of the instantaneous sound pressure for each unique sound source and applying the 15 percentile rule accounting for meteorological variation.

Replenishment Quantity – The quantity of ammunition produced at full production.

ACRONYMS AND ABBREVIATIONS

BNOISE2	Blast Noise Impact Assessment
CDNL	C-weighted Day-Night Level
CHPPM	United States Army Center for Health Promotion and Preventive Medicine
dB	Decibels
DNL	Day-Night Average Sound Level
ENMP	Environmental Noise Management Program
IAAAP	Iowa Army Ammunition Plant
km	kilometers
Lb	Pound
LUPZ	Land Use Planning Zone
PK15(met)	Single event peak level exceeded by 15% of events
TP-DNT	Target Practice – Day Night Thermal
USAPHC	United States Army Public Health Command
<	Less than
>	Greater than

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A. INTRODUCTION

The purpose of the Environmental Noise Management Program (ENMP) Plan for the Iowa Army Ammunition Plant (IAAAP) is to address noise associated with military readiness activities conducted at the installation and to protect the mission of the installation by minimizing noise impacts resulting from these activities on land outside of the installation. The noise producing activities on the Installation addressed by this plan are as follows: American Ordnance LLC (AO) test fire activities and pistol range training and Iowa Army National Guard equipment training. Interior building noise is not addressed by this plan as a separate hearing conservation program conducted by the AO Environmental, Safety and Health Division is in-place to minimize interior noise and to adequately protect workers by the use of hearing protection where interior noise cannot be reduced to an acceptable level. The ENMP has been prepared to address the requirements of AR 200-1, dated 13 December 2007, paragraphs 14-1 thru 14-4. The AO test fire activities are capable of producing noise complaints and have been evaluated since the early 1980's by the United States Army Center for Health Promotion and Preventive Medicine (CHPPM). CHPPM in 2010 became the US Army Public Health Command (USAPHC). The current evaluation is entitled: Operational Noise Consultation, No. WS.0020092-c-14 for Iowa Army Ammunition Plant, dated 22 September 2014. This evaluation addresses test fire noise from the original test fire area and the test fire range. All test fire performed in 2017 at the original test fire area was under daylight conditions. Test fire performed in 2017 at the test fire range was performed primarily under daylight conditions with a lesser quantity of test fire performed at night to test the prototype round, as discussed later in this plan.

The original test fire area is used on a routine basis to perform horizontal (static testing) of ammunition produced at the IAAAP and has also been used to test fire blank ammunition rounds when produced at the IAAAP. Due to concerns about potential noise complaints from the test fire of the 40 Lb. cratering charge, the largest ammunition round test fired at the original test fire area, Ms. Catherine Stewart, CHPPM now USAPHC, recommended in 2007 that AO publish notices in The Hawk Eye newspaper, a newspaper of general circulation, to alert the public to an increase in noise prior to test fire of the 40 Lb. cratering charge. The most recent public notice was published on 3 September 2012, which occurred prior to the September 2012 test fire. AO management previously made the decision not to publish the notice each time test fire of the is to be performed. The public notice states that although the testing may be audible in areas outside the IAAAP, the noise is not expected to reach levels which would concern the public.

In 2017, no noise complaints were received from the public in response to test fire performed at either the original test fire area or the test fire range. The most recent noise complaint associated with the original test fire area occurred in April 2014. There have been no noise complaints associated with the test fire range activity since the initiation of the test fire in 2012. A listing of recent year noise complaints appears in Section I. Noise Complaint Management (page 10 of 17). The possibility exists under the third party contract arrangement that warheads may be brought on-site for test firing.

Previously, CHPPM, now USAPHC, reviewed information provided by AO on pistol range training by AO security personnel, pistol range training by the Army Reserve Military Police unit on duty at the IAAAP and equipment operation training by the Iowa Army National Guard. CHPPM determined these activities should not produce noise sufficient to generate noise complaints and no further assessment (noise contours) was required.

The Army Reserve Military Police Unit is no longer on duty at the IAAAP. The Iowa Army National

Guard is not conducting equipment training at this time, the training could resume in 2018. The pistol range training and equipment training are performed in remote areas of the installation surrounded by tree covered hills which act as a natural barrier to deflect/absorb sound. The land areas outside of the installation perimeter fence from where the pistol range and Iowa Army National Guard equipment training areas are located consists either of tree covered hills or rolling agricultural land in a sparsely populated rural area of Des Moines County Iowa. There is no history of noise complaints resulting from past pistol range or Iowa Army National Guard equipment training activities. Due to the elevated security level at the IAAAP, no information will be provided in this document as to the number of personnel requiring the above training or to the type and number of weapons to be fired at the pistol range. The Iowa Army National Guard may in the future request permission to perform hand held weapons training using blank ammunition. Prior to this training being performed, USAPHC will be contacted to review the training.

B. BACKGROUND

Iowa Army Ammunition Plant (IAAAP) is a Government-Owned, military industrial installation under the jurisdiction of Headquarters, U. S. Army Joint Munitions Command (JMC) operated by American Ordnance LLC, under a facilities contract. The primary mission of this plant is to load, assemble, and pack (LAP) ammunition items. The IAAAP has produced a large variety of explosive loaded components and end items such as small boosters, mines, artillery rounds, missile warheads and cluster bombs. The IAAAP also has research and development capabilities and performs some depot mission work.

The IAAAP is located in the southeastern portion of the State of Iowa, (see Attachment 1 for Orientation Map) consisting of approximately 19,000 acres within a rural area of Des Moines County. U.S. Highway 34 parallels a segment of the installation's northern boundary. The main line of the Burlington Northern Santa Fe Railroad is immediately adjacent to the installation.

Material and personnel are transported throughout the installation over an internal network of 149 miles of road and 102 miles of railroad tracks. The topography within the installation varies from the flat northern tier to the gently undulating terrain with steep slopes forming drainageways in the southern portion. The elevation ranges from 575-725 feet above sea level. The surface drainage is controlled by three creeks: Long Creek in the west, Brush Creek in the center, and Spring Creek in the east. Long Creek is within the Skunk River watershed. Spring Creek and Brush Creek are within the Mississippi River watershed.

The terrain consists of grassland, forestland, and tillable prairie soils. An 83-acre lake, George H. Mathes Lake, with an estimated capacity of 310 million gallons of water, is located totally within the plant area, and a 29 million-gallon water emergency reservoir is located near the main heating plant. In addition, there are three elevated water storage tanks. Waste treatment is provided by two secondary sewage treatment plants and eight septic tank systems.

The installation has a laundry, maintenance shops, and a clinic (medical). The buildings, such as changehouses for employees, office buildings, mechanical equipment buildings, storage warehouses, and steam generating plants for local steam requirements, are within the manufacturing area.

C. LAND USE DEVELOPMENT POLICIES

The Department of Army Environmental Noise Management Program’s primary strategy for dealing with incompatible land-use is through land-use planning using annual Day-Night Sound Level. Installation facility planners are to work with community planning agencies to promote adequate buffer zones between the noise sources and the noise sensitive areas.

For planning purposes, maps depicting the noise contours in the immediate vicinity of the plant are prepared based upon the current and projected peacetime operations for a typical day. From these maps, incompatible land-use or potentially incompatible land-uses can be identified. The intent of the Environmental Noise Management Program process is that through proper and timely land-use planning incompatible land-use outside the installation can be avoided. However, this scenario is not applicable to IAAAP as Des Moines County, in which the IAAAP is located, and Lee County, immediately to the south of the IAAAP, do not have zoning regulations which restrict or prohibit construction. The installation cannot depend on adequate buffer zones being developed in the rural area around the installation. Therefore, the installation must strive to ensure that undesirable noise levels are confined to the installation.

D. ASSESSMENT CRITERIA

Test fire noise is defined as being high-amplitude impulsive noise because the noise is generated from the detonation of ammunition measuring 20 millimeters and larger in size. The CDNL is used to evaluate the environmental impact of high-amplitude impulsive noise. AR 200-1 defines noise zones, as LUPZ, Zone I, Zone II and Zone III. These noise zones are assigned specific CDNL's. The acceptability levels for the zones were determined through surveys conducted by independent government and private organizations. The following chart represents the current consensus for high-amplitude impulsive noise.

Noise Zone	Acceptability for Noise Sensitive Land-Uses	Population Annoyance Percent	Noise Limits CDNL C-Weighted Decibels
LUPZ	Acceptable	Less than 15	57 -62
I	Acceptable	Less than 15	< 62
II	Normally unacceptable	15-39	62-70
III	Clearly Unacceptable	Greater than 39	>70

The LUPZ designation is considered acceptable for housing, schools, medical facilities and other noise sensitive land-uses. The Zone II designation is considered normally unacceptable for noise sensitive land-uses but is acceptable for industrial, manufacturing and agricultural land uses.

Zone III is clearly unacceptable for noise sensitive land-uses. Land-uses for Zone III areas are usually limited to industrial and agricultural activities. The noise zones

for the test firing at IAAAP were developed by CHPPM using the Micro B Noise model developed by the U.S. Army Construction Engineering Research Laboratory. This program calculates the CDNL based on the locations, size and number of detonations on the installation.

The noise simulation program used by USAPHC to assess demolition and large caliber weapons (20mm and greater) noise is the BNOISE2 program (U. S. Army 2009). The BNOISE2 program requires operational data concerning the types of weapons fired from each range or firing point, the number and types of rounds fired from each weapon, the location of targets for each range or firing point and the amount of propellant used to reach the target. Existing records on range utilization along with reasonable assumptions are used as BNOISE2 inputs. The assessment period used to create the IAAAP CDNL contours was 250 days. The inputs used to generate the noise contours for this assessment were generated by USAPHC using calendar year 2013 actual test fire quantities for the original test fire area and the test fire range which appear on page 12 of 17. The actual test fire quantities for calendar years 2014, 2015, 2016 and 2017 appear on Pages: 12 of 17, 13 of 17, 14 of 17, and 15 of 17, respectively. The proposed 2018 test fire quantities appear on Page 16 of 17.

The annual level of activity is variable in comparison to other test fire activities. In 2008, rounds, in 2009, rounds, in 2010, rounds, in 2011, rounds, in 2012, rounds and in 2013, rounds. The test fire when performed was typically performed approximately every three months in a short period of time of not exceeding several hours in one day.

Attachment 2 (Figure 1. IAAAP Noise Zones)

Figure 1 contains the annual average noise zones (for the original test fire area and the test fire range). Other than a small portion of the Land Use Planning Zone (LUPZ) (57-62 dB CDNL) the Noise Zones remain within the IAAAP property. The LUPZ extends less than 80 meters beyond the northern boundary, encompassing the self-storage area at the intersection of East Street and South Drive in Middletown. The Noise Zones remaining within the IAAAP or encompassing a non-noise sensitive land use indicate that average noise levels from testing are compatible with the surrounding environment. However, there is potential for individual events to cause annoyance and possibly generate noise complaints.

Attachment 3 – (Figure 2., Conventional Test Fire Activity (FS-6 and FS-14) Complaint Risk)

Under unfavorable weather conditions, complaint risk guidelines indicate that areas surrounding IAAAP may receive noise levels associated with a moderate risk of complaints from test fire at the original test fire area. The moderate risk of complaint (115-130dB Peak) area extends beyond the northern boundary less than 800 meters, entering Middletown, to the west approximately 2 kilometers (km) (1.24 miles) and to the south approximately 2.6 km, encompassing the town of Augusta. Current land uses within the moderate risk of complaint area include agricultural, scattered residential and small towns. The high risk of complaint (>130 dB Peak) area does not extend beyond the boundary.

Under neutral weather conditions, the moderate complaint risk area extends less than 100 meters beyond the southwestern boundary into a wooded area. The high risk of complaint does not extend beyond the installation boundary.

The moderate risk of complaint (115 dB PK 15 met) area extends beyond the northern boundary less than 800 meters, entering Middletown; to the west approximately 2,000 meters; and to the south approximately 2,600 meters, encompassing the town of Augusta. The high risk of complaint (130 dB PK15 met) area does not extend beyond the boundary.

Attachment 4 – (Figure 3, Conventional Test Fire Activity (FS-15 Complaint Risk).

Under unfavorable weather conditions, when test fire is performed the complaint risk guidelines indicate a moderate risk of complaints extending to the north approximately 3.8 km (2.34 miles) to Danville; to the west approximately 5 km (3.11 miles) and to the south/southwest approximately 4 km (2.49 miles). Current land uses within the moderate risk of complaint area include agricultural, scattered residential and small towns. The high risk of complaint extends approximately 250 meters beyond the boundary in the southwestern corner into a wooded area.

Under neutral weather conditions, the moderate risk of complaint risk area extends approximately 800 meters beyond the western boundary and less than 1 km (0.62 miles) beyond the southwestern boundary into the a wooded area. Current land use within this area is predominately agricultural with scattered residential. The high risk of complaint area does not extend beyond the boundary. It is important that test fire of the be performed under optimum conditions for test fire to minimize noise complaints from the public.

Attachment 5 – (Figure 4, Test Fire Activity Complaint Risk)

Figure 4 depicts peak noise levels for the activity.

Under unfavorable weather conditions, the noise levels indicating complaint risk do not extend beyond the installation boundary.

Under neutral weather conditions, Due to the small size of the complaint area it is not necessary to develop complaint risk potential based on neutral weather conditions.

E. ASSESSMENT FINDINGS

The noise zones remaining within the IAAAP or encompassing undeveloped areas indicate that annual average noise levels from testing are compatible with the existing surrounding environment. Yet, there is potential for individual events to cause annoyance and possibly noise complaints.

Under unfavorable weather conditions, complaint risks guidelines indicate a moderate risk of complaints from FS-6 and FS-14 conventional test fire activity. Current land use surrounding the IAAAP consists of agricultural, scattered residential areas and small towns. Under neutral weather conditions the risk of complaints from the conventional test fire activity at FS-6 and FS-14 is low.

The test fire, when performed at FS-15, has a moderate risk of generating noise complaints under both neutral and unfavorable weather conditions. The risk of receiving noise complaints from the test fire activity is low.

USAPHC is concerned that noise from single events could cause annoyance and the possibility of noise complaints. USAPHC feels that annoyance and noise complaints could occur during certain meteorological conditions such as when the wind blows in the direction from the test fire area to the nearest installation boundary and/or during a temperature inversion resulting in an increase in the propagation of sound. USAPHC used a set of guidelines developed by the Naval Surface Warfare Center to evaluate the complaint potential from impulsive noise. These impulsive noise guidelines for delaying tests at the Naval Surface Warfare Center were based upon over 20 years of experience using meteorological forecasts and are shown below.

Predicted Sound Level dB	Large Caliber Weapons Noise Limits (dB) PK 15(met)	Action
< 115	Low risk of noise complaints	Fire all programs
115-130	Medium risk of noise complaints	Fire important tests. Postpone noncritical testing, if feasible.
130-140	High risk of noise complaints, possibility of damage	Only extremely important tests should be fired
> 140	Threshold for permanent physiological damage to unprotected human ears. High risk of physiological and structural damage claims.	Postpone all explosive operations.

Studies have found that variation of temperature and wind velocity with altitude can cause a noise event to be inaudible at one time and annoying at another time. This phenomenon is referred to as atmospheric refraction. Atmospheric refraction is the bending of a sound ray caused by the variation with altitude of the speed of sound. This variation is a function of temperature and wind velocity. This bending of the sound rays can concentrate acoustic energy, causing sound levels to be significantly greater. Conversely, the sound rays can also be bent upward so that the acoustic energy of the event is dissipated by the atmosphere, resulting in a lower sound level on the ground.

A simplified technique has been developed to predict atmospheric refraction conditions by the Explosives Research Group (ERG). The ERG technique summarizes the results of this research into a series of "good" and "bad" conditions. These results are listed below. This technique provides a good first approximation of the effects of the existing weather conditions on noise propagation. The IAAAP will use this technique as appropriate to the site to reduce the possibility of complaints. These "good" and "bad" conditions are as follows:

"GOOD" Conditions	"BAD" Conditions
<p>Clear skies with billowy cloud formations, especially during warm periods of the year.</p> <p>A rising barometer immediately following a storm.</p>	<p>Days of steady winds of 10 mph or more and/or with gusts of greater velocities (above 20 mph) in direction of residences close by. The prevailing wind direction is from the southwest in the summer and northerly in the winter.</p> <p>Clear days on which "layering" of smoke or fog are observed. Cold, hazy or foggy mornings including low cloud cover.</p> <p>Days following a day when large extremes of temperature (about 20 degrees C) between day and night are noted. In winter conditions when frozen ground is present and overnight temperatures are less than 20 degree F, the test fire of the 40 Lb. Cratering Charge shall be performed only between the hours of 1000 (10 am) and 1500 (3 pm) hours due to thermal inversion. Generally high barometer readings with low temperatures.</p>

F. ASSESSMENT RECOMMENDATIONS

USAPHC has recommended the IAAAP continue with its Standard Operating Procedures (ENMP) including complaint management and monitoring both the noise environment and any proposed land use changes surrounding the installation. The IAAAP is to contact USAPHC to update the Noise Zones if the projected conventional test fire activity exceeds pounds of explosives per year or if activity increases beyond rounds per year.

G. RESPONSE TO RECOMMENDATIONS

The installation will continue to support the Environmental Noise Management Program as required by AR 200-1 (Environmental Protection and Enhancement), paragraph 14-1 thru 14-4.

USAHC indicated in the current Operational Noise Consultation No. WS. 0020092-c-14 for IAAAP dated 22 September 2014 that if test fire activities increase at the Original Test Fire Area to a total charge rate of more than pounds on a yearly basis, or increases to more than rounds at the Test Fire Range, on a yearly basis, they are to be advised for evaluating the additional noise and updating noise contours, if required.

USAPHC will be contacted for additional noise evaluation should the need for training at the pistol range increase significantly either by additional AO Security personnel training, initiation of Iowa Army National Guard hand held weapons training using blank ammunition or the Iowa Army National Guard equipment training increases significantly.

H. REPLENISHMENT QUANTITIES

The installation's replenishment quantities have been reviewed and the determination has been made that replenishment test fire requirements will not result in the Zone II Noise Zone extending beyond the installation boundary. As a result, the existing land-use is considered to be acceptable for replenishment quantities.

I. NOISE COMPLAINT MANAGEMENT

Noise complaints generated from interior building noise can be reported by installation employees to the AO Director Environmental, Safety and Health at extension 753-7992. The noise complaint will be handled in accordance with the AO Environmental, Safety and Health Division installation hearing protection program. Non-interior building noise complaints generated by operations, such as test fire activities, can be reported by on-site installation employees to the AO Environmental Manager at 753-7295.

The public can report noise complaints by calling telephone numbers (319-753-7114 or 753-7414) at the Iowa Army Ammunition Plant. Telephone number 753-7114 (General Information) is answered by AO during normal working hours of 0700 – 1730 hours Monday thru Thursday, while 753-7414 is answered 24 hours per day by the AO Security Department.

The AO Security Department will forward the call to the AO Environmental Department during normal office hours. If a noise complaint is received outside of normal office hours, AO Security Department personnel will ask the caller for their name, address and phone number as well as the date and time when the noise complaint occurred and also asks if the caller would like feed back information. The caller may reserve the right to remain anonymous. AO Security Department personnel will provide the assembled information to the AO Environmental Department by voice mail or by email message.

When the AO Environmental Department opens the voice mail or email message the completion of the Noise Complaint Report form (Attachment 6) can be initiated. The caller provided information consisting of the date(s) and time(s) of the noise complaint(s) will be recorded on the form. The caller can remain anonymous or have their name, address and telephone number placed on the form and can request feedback from the noise complaint. The AO Environmental Department employee completing the Noise Complaint Report form is responsible for including their name on the form, as the person receiving the call, and records the information the caller provided.

The Noise Complaint Report Form is forwarded to the Test Fire Supervisor who completes the remaining portions of the form to record weather conditions and test fire activity during the date(s) and time(s) specified by the caller. The completed form is returned to the AO Environmental Department. If the caller requests feedback, the information on the form is mailed to the caller. The completed Noise Complaint Record Form is distributed to the Army ACO Staff, the AO Test Fire Manager, and the AO Environmental Manager. The AO Environmental Department maintains the noise complaint forms and a record of the noise complaints.

The noise complaints received from the public in recent years are as follows:

- 10 April 2014
- 18 September 2012
- 4 March 2011
- 17 February 2011
- 2 December 2010
- 19 October 2009
- 12 March 2008
- 1 March 2007
- 10 January 2006

(Prior to 10 January 2006, the last noise complaint was received in May 1999)

J. TEST FIRE ACTUAL, 2013, 2014, 2015, 2016, 2017 and PROPOSED 2018

Original Test Fire Area

The total explosive charge rate for the actual test fire performed in 2013 at the original test fire area was pounds. The 2013 total explosive charge rate was used by USAPHC to prepare the current noise contours completed in September 2014 (Operational Noise Consultation No. Ws. 0020092-C-14 for IAAP dated 22 September 2014). The 2013 actual test fire quantities were the most recent yearly test fire quantities available when requested by USAPHC in mid-2014. The total explosive charge weight on a yearly basis for test fire performed in subsequent years is as follows:., 2015 – lbs., 2016 - lbs. and 2017 – lbs. The total explosive charge weight of test fire shots proposed in 2018 at the original test fire area is pounds. The proposed test fire charge rate for 2018, was submitted to Ms. Catherine Stewart, USAPHC, who responded by email dated 11 January 2018 to advise the Operational Noise Consultation No. Ws.0020092-C-14 for the IAAP dated 22 September 2014 remains valid for the proposed 2018 activities as the minor increase in test fire activity will not require an update of the noise zones.

Test Fire Range

The noise contours prepared in 2009 for the test fire range continue to be used as the current noise contours (Operational Noise Consultation No. Ws. 0020092-C-14). These noise contours were based on each test fires per year. USAPHC chose this quantity to avoid the need to generate new noise contours on an annual basis, due to fluctuations in test fire activity. The actual test fire quantity in 2013 was rounds. The total on a yearly basis performed in subsequent years is as follows: - rounds, 2015 - rounds, 2016 –rounds and 2017- rounds.

The current noise contours for the original test fire area and for the proposed test fire range did not produce undesirable noise contours beyond the installation boundary, providing test fire is performed under satisfactory weather conditions. However, the test fire may produce land use Planning Zone (57dB CDNL) noise contours that extend less than 50 meters beyond the north installation boundary into the City of Middletown. The city of Middletown maintenance building and privately owned storage buildings are located in the 50 meter area. There are no residences located within the 50 meter area.

Early in each successive year the proposed test fire quantities for the original test fire area and the test fire range will be forwarded to USAPHC for an evaluation to determine if the existing noise contours are adequate for the proposed activities or if new noise contours are needed to adequately address the proposed test fire load during the coming year.

Detailed information on ammunition items, quantities and explosives weights of all ammunition items test fired in 2013, 2014, 2015, 2016, 2017 and the proposed test fire for 2018, appears as follows on Pages 12 of 17 thru 16 of 17:

2013 Actual Test Fire

Original Test Fire Area (actual)

Test Fire Range (actual)

Nomenclature	Explosive Weight	Quantity

2014 Actual Test Fire

Original Test Fire Area (actual)

Facility	Nomenclature	Explosive Weight	Quantity

Test Fire Range (actual)

Nomenclature	Explosive Weight	Quantity

2014 Night Test Fire of the TP-DNT Rounds at the Test Fire Range

The night test fire of the TP-DNT prototype rounds in development at IAAAP was performed on a very limited basis in 2014 as follows: A quantity to high velocity rounds were night test fired between 8 January and 14 April 2014. A quantity of low velocity rounds were night test fired between 12 and 13 September 2014.

2015 Actual Test Fire

Original Test Fire Area

Facility	Nomenclature	Explosive Weight	Quantity

Test Fire Range

Nomenclature	Weight	Quantity

2015 Night Test Fire of the TP-DNT Rounds at the Test Fire Range

Additional test fire of prototype rounds assembled in development at IAAAP was performed in 2015 at the test fire range. A total of rounds were test fired at a ratio of night. Also each were fired at night. Ms. Catherine Stewart, USAPHC, indicated by email dated 13 March 2015, that the additional test fire, including the night test fire, at the above levels was compatible with the existing noise contours.

2018 PROPOSED TEST FIRE

Original Test Fire Area

Facility	Nomenclature	Explosive Weight	Quantity

Test Fire Range

Nomenclature	Explosive Weight	Quantity

*An additional D/N/T rounds are proposed to be test fired in 2018 which are not counted in the above total for the test fire range. An email from Ms. Catherine Stewart, USAPHC dated 13 July 2016, advised D/N/T rounds do not contain high explosives and the only noise would be from the launch noise which should be inaudible off-site. As a result, these rounds are not included in the total quantity for the test fire range. The other rounds contain high explosives.

USAPHC Evaluation of Proposed 2018 Test Fire Activities

The proposed 2017 test fire activities at the original test fire area and the test fire range, including night test fire, were forwarded to Ms. Catherine Stewart, USAPHC for review who responded by email dated 11 January 2018 and advised the Operational Noise Assessment for the IAAAP dated 22 September 2014 is still valid and the minor increase in activity proposed for 2018 will not change the noise zones. In the event test fire quantities increase significantly during 2018, USAPHC will be contacted and advised of the increase to determine if the existing noise contours remain acceptable or if new noise contours are required.

1500mm Range Construction at the Existing Test Fire Range

In 2017, the 1500 meter range was constructed adjacent to the existing 200 meter range. Both the 200 meter range and the 1500 meter range will be in operation in 2018. The 1500 meter range will not require new noise contours as per Ms. Catherine Stewart, USAPHC, in an email dated 16 August 2017. Ms. Stewart previously made this position known in her 13 July 2016 email, written prior to the construction of the 1500 meter range. The above position is due to the test the 1meter range generating only minimal launch noise which should be inaudible off-site as this round does not contain high explosives. The operation of the 1500mm range will not affect or be affected by ongoing test fire at the

200mm range.

J. Damage Claims Resulting From Test Fire Activities

Prior to February 2011, all requests received from the public by AO to obtain claims forms to seek reimbursement for damages believed to be caused by test fire noise were forwarded to the ACO Staff at the IAAAP. As a result, AO maintained no records on these claim requests and has no information on how the claims were resolved.

In February 2011, AO assumed responsibility for damage claims resulting from test fire noise. It was determined that under the conditions of the current Facility Contract, between the Army and AO to operate the IAAAP, that AO is responsible for damage claims resulting from test fire activity.

In the event the public experiences damage to property which they believe has been caused by noise from test fire activity and wish to pursue a damage claim for reimbursement, the following course of action will apply:

- The person pursuing the claim will be asked to provide a written cost estimate for the damage repair or replacement of the damaged item(s) to AO Environmental.
- AO Environmental will forward the written cost estimate to the AO President, or his designee, at the IAAAP for review and a determination on payment of the damage claim. If the damage claim is approved, AO will issue a check for payment of the claim and mail the check to the person submitting the claim.
- If the damage claim is not approved, the person submitting the damage claim will be notified in writing by AO that the claim will not be paid.

AO paid one damage claim to replace a cracked window glass at a private residence due to test fire performed on 17 February 2011 at the original test fire area.