U.S. ARMY CORPS OF ENGINEERS

NIAGARA FALLS STORAGE SITE

PROPOSED PLAN PUBLIC MEETING

Wednesday, October 21st, 2020

7:00 PM

U.S. Army Corps of Engineers

1776 Niagara Street

Buffalo, New York 14207

APPEARANCES:

[redacted], Outreach Specialist

[redacted], Chief, Special Projects Branch

[redacted], Niagara Falls Storage Site Project Manager

[redacted], Environmental Project Management Team

MEETING REPORTER: [redacted]

P U B L I C C O M M E N T S

[redacted]: Good evening everyone. This meeting is being recorded. A court recorder is also on the line to prepare an official transcript of the meeting. Please keep your phones on mute during the presentation portion of this meeting. During the public comment portion of the meeting, you will be called in the order that you signed up to speak.

I will now introduce [redacted], Chief of the Special Projects Branch at the U.S. Army Corps of Engineers Buffalo District.

[redacted]: Good evening everyone. My name is [redacted] from the U.S. Army Corps of Engineers Buffalo District and on behalf of [redacted], Commander of the Buffalo District, welcome and thank you for attending our virtual public meeting this evening. I have a few brief opening remarks before Jeff Rowley, our Project Manager, leads us through tonight's discussion.

[redacted] regrets not being

able to meet you in person tonight. He was unable to attend due to a training event with other district commanders in Washington. [redacted] took command in June of this year and is eager to visit with community members at all our project sites. I would like to take this time to thank those participants from the Tuscarora Nation and the federal, state, and local elected officials and Agency representatives who are joining us tonight.

The Buffalo District serves the people in the watersheds of the lower Great Lakes from Massena, New York, in the east to the Indiana state line in the west, and we have done so since 1857. We have many projects within this area of responsibility, but this one is close to home.

Most of our nearly 300 district employees live in this community, and we deeply care about serving and safeguarding our neighbors and fellow community members. As we investigate and remediate sites, like the

Niagara Falls Storage Site and others sites in Western New York, our number one priority and decisionmaking criteria is protecting human health and the environment.

Tonight's agenda is on this slide. We are here tonight to discuss the Niagara Falls Storage Site which is being addressed under the Formerly Utilized Sites Remedial Action Program, or FUSRAP. Our priority when implementing the program is to ensure we are protective of human health and the environment. We implement FUSRAP following the established federal law for environmental cleanup – the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA.

The CERCLA process requires that we conduct a public meeting to receive your comments on our preferred alternative, which is the most important part of tonight's public meeting. We are here tonight to receive your comments.

To frame tonight's discussion I will

reinforce a recent major milestone at the site. In March 2019 the Corps of Engineers signed a record of decision to completely remove and ship out of state for permanent disposal the entire Interim Waste Containment Structure.

Removing the Interim Waste Containment Structure permanently removes 99% of the radioactivity from the site and community. Additionally, the high activity residues buried inside the Interim Waste Containment Structure represent only 1% of the total material to be removed from the site.

Since we signed the record of decision, we have made good progress in the development and procurement of the design contract to perform the detailed engineering to remediate the site. We expect to award this design contract in 2021 and our efforts have not been delayed or impacted by the ongoing COVID-19 pandemic.

Tonight our focus is on selecting a remedy for the remainder of the site outside of the Interim Waste Containment Structure.

Specifically, the proposed plan and preferred alternative for what are called the Balance of Plant and Groundwater Operable Units. Releasing this proposed plan brings us one step closer to the site's remediation.

Our preferred alternative, which is shown on this slide, proposes a remedy for addressing contaminated soils, buildings and building foundations, utilities, roads and roadbeds, and contaminated groundwater. The Corps' preferred alternative will be protective of human health and the environment, complies with applicable or relevant and appropriate requirements, is cost-effective and utilizes permanent solutions that will preclude any future environmental impacts.

Thank you again for being with us virtually tonight and I appreciate your willingness to participate virtually under our current COVID-19 restrictions. This is our first virtual public meeting and we think we have worked out some minor kinks, but please

bear with us if we experience any technical difficulties.

I will now turn this meeting over to Mr. [redacted], Niagara Falls Storage Site Project Manager, to provide an update on the progress we have made in planning for the cleanup of the site and to talk about our preferred alternative for the site's Balance of Plant and Groundwater Operable Units.

[redacted]: Thanks, [redacted] All right. We tried to keep our use of acronyms to a minimum in this presentation. Some of our more frequently used acronyms in regard to Niagara Falls Storage Site are on this slide. We will explain these terms as we come across them in the presentation.

Further information about these terms is available in the fact sheets on the project website. The web address will be on the final slide of the presentation.

Next we will talk about the FUSRAP Objectives. The work we are doing at Niagara Falls Storage Site is authorized under the

Formerly Utilized Sites Remedial Action Program or FUSRAP. The program was initiated in 1974 to identify, investigate, and, if necessary, clean up or control sites throughout the United States contaminated as a result of Manhattan Engineer District or early Atomic Energy Commission activities. The objectives for FUSRAP are identified on this slide.

Our number one priority while performing activities at the site is the protection of human health and the environment and the safety of the community, and site workers during the cleanup.

Niagara Falls Storage Site is located in Lewiston, New York, situated within what was the Lake Ontario Ordnance Works. The Lake Ontario Ordnance Works was a trinitrotoluene, or TNT, facility that came online in the early 1940's; it was decommissioned in 1943.

The United States had a surplus of TNT during the World War II effort, so the country no longer needed the operation of that

facility. The Atomic Energy program started in the same timeframe, and residues and waste materials being generated as a result of their work found its way to Niagara Falls Storage Site where they were stored for a considerable length of time.

If you focus on the right-hand side of your screen, you can see the smaller Niagara Falls Storage Site. During the early 1980s, the Department of Energy consolidated the contaminated materials at the site and its vicinity properties into the Interim Waste Containment Structure or IWCS, which is the dark blue area. The site is currently owned by the federal government.

The Buffalo District maintains the site and performs environmental surveillance to ensure the protectiveness of the Interim Waste Containment Structure.

For purposes of the feasibility study, the site was divided into three operable units or OUs. The Interim Waste Containment Structure OU is the engineered landfill within the diked

area of the NFSS and applies to all of the material within the IWCS. We have a record of decision for the IWCS. Tonight though, we will focus on the remaining operable units. The Balance of Plant or BOP OU includes all of the material at the NFSS not in the IWCS. This includes soils, buildings and building foundations, utilities, roads, and roadbeds. The Groundwater OU refers to contaminated groundwater.

We follow the processes outlined in the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan. That process is outlined on the screen. Sorry about that. Little technical glitch right there.

This slide shows where the Niagara Falls Storage Site Operable Units are in the CERCLA process. The record of decision for the Interim Waste Containment Structure was signed in March 2019, with complete removal of the

contents of the IWCS as the selected remedy.

Last fall we released the feasibility study for the Balance of Plant and Groundwater Operable Units. Tonight we will be discussing the proposed plan for those operable units And describing the Corps' preferred alternative to mitigate risks presented by small areas of remaining contamination on the site.

The site-wide remedial action phase is also outlined on the right of this slide. During fiscal year 2021, we will award an architect-engineer services remedial design and construction oversight contract and begin the work to ultimately clean up the site.

Tonight, after the presentation we will receive your comments on the proposed plan. The comment period ends on December 5, 2020, so please provide your comments tonight. You can e-mail fusrap@usace.army.mil or mail them to the District. The District's e-mail and mailing address will be provided at the end of

the presentation.

The preferred alternative may be modified based on any new information acquired during the designated public comment Period. Responses to comments received will be provided in the record of decision, which will identify the selected remedy to be implemented.

We discussed the feasibility study and went over the remedial alternatives with you during our information session last fall. The presentation and posters from that meeting are available on the project website. The following slides give an overview of what was covered during that meeting.

The Niagara Falls Storage Site is currently zoned for light industrial use, which is intended as a transition zone between residential and heavy industrial areas. The land uses for the properties immediately surrounding the site are either heavy industrial or industrial. Light industrial use includes manufacturing, processing, and

wholesale/warehousing.

At Niagara Falls Storage Site with an industrial land use, the construction worker is the type of worker with the greatest potential exposure to contaminated media. Preliminary remediation goals or preliminary cleanup goals were developed based on risks to the construction worker, and would be considered protective for all types of worker exposure.

This graphic shows the construction worker's potential exposure pathways when working at the site in its current conditions. The site media are soil, groundwater, building foundations, and road bedding. These site media exhibit radionuclides of concern and/or chemicals of concern at levels that are greater than the preliminary remediation goals for the construction worker.

The light purple areas indicate areas of contaminated media with concentrations above Preliminary remediation goals that warrant cleanup. A more detailed map of the areas

with contamination is available in the fact sheet on the project website.

Radionuclides of concern for which preliminary remediation goals were developed for soil, Building 433, and the foundations of former Buildings 430 and 431 and 432 are: Uranium-238, thorium-230, and radium-226. The preliminary remediation goals for these radionuclides of concern also cover their long-lived daughter products.

Chemicals of concern for which preliminary remediation goals were developed are: Volatile organic compounds in soil and groundwater, polychlorinated biphenyls in pipeline sediments, water in drains for Building 401 and the concrete foundation of Building 401; and polycyclic aromatic hydrocarbons in surface and near surface soil and building foundations.

As we go further through this slide deck, I want to mention that we will be talking about these buildings again; 430, 401, 431, 432 and 433 so just kind of keep this figure

in mind when we go through the alternatives.

Based on the information gathered from numerous investigations, monitoring events, and studies of the site, the next couple of slides discuss the impacted media at the site.

There is an estimated 5,400 cubic yards of impacted soil and road bedding, and there is a trench along the side of the Building 431 and 432 foundations that is estimated to contain 1,000 cubic yards of contaminated soil and concrete.

The Building 401 foundation and utilities drain system are estimated to contain 727 cubic yards of impacted material. As shown in the photo, the building drains in former Building 401 have been plugged.

Building 433 and the foundations of former Buildings 430, 431 and 432 are estimated to contain 1,482 cubic yards of contaminated material. The estimated volume of impacted site groundwater is 3,300 gallons.

Next we will discuss the process for evaluating the alternatives developed in the

feasibility study.

The feasibility study identifies, develops, and evaluates remedial alternatives, analyzing in detail each remedial alternative for its, one, overall protection of human health and the environment, two, compliance with applicable or relevant and appropriate requirements; three, long-term effectiveness and permanence; four, reduction of toxicity, mobility, or volume through treatment; five, short-term effectiveness; six, implementability and the final is cost.

This slide identifies the applicable or relevant and appropriate requirements that all of the developed alternatives had to meet. Note that no state or federally promulgated chemical-specific regulations were identified that were either applicable, or relevant and appropriate for protection of construction worker exposure to volatile organic compounds-contaminated soil and groundwater and to PCBs in Building 401 utility water.

Therefore, the Corps relied on the CERCLA

baseline risk assessment it conducted for the site to calculate risk-based cleanup goals for these contaminants that are protective of the construction worker exposure to groundwater and utility water.

These are the alternatives outlined in the feasibility study. Since Alternative 1 is No Action and it is not protective of human health and the environment and does not meet the applicable or relevant and appropriate requirements, the alternative is removed from consideration and is used only for comparison purposes.

The remaining alternatives are discussed on the next few slides. For Alternatives 2 through 5, following removal of all materials exceeding the feasibility study preliminary remediation goals, the excavated areas would be backfilled, the site would be restored and would be suitable for industrial land use.

Once again, Alternative 3 is our preferred alternative.

In Alternative 2 all impacted soil,

contaminated building foundations, and the Building 401 foundation and impacted drains that exceed the preliminary remediation goals would be removed and disposed at a permitted off-site facility. Volatile organic compound-contaminated soil and groundwater in the plume in the north area of the site would be removed and backfilled. Prior to backfilling, an amendment would be added to promote degradation of residual, dissolved-phase impacts. An estimated 8,600 cubic yards of in situ contaminated soil and concrete including buildings and building foundations, and 3,300 gallons of impacted groundwater would be excavated/recovered for off-site disposal under Alternative 2.

Alternative 3, is the same as Alternative 2 except in this alternative, Building 433 and the foundations of former Buildings 430, 431/432 would be left in place, and would be decontaminated by scarification to remove the risk associated with these media. An estimated 7,000 cubic yards of in situ

contaminated soil and Building 401 foundation concrete, and 3,000 gallons of impacted groundwater would be excavated/recovered for off-site disposal under Alternative 3. A nominal amount of impacted concrete dust from scarification, approximately 80 cubic yards, would also require disposal.

Alternative 4 is similar to Alternative 3 in that soil and road bedding that exceeds the feasibility study preliminary remediation goals and the Building 401 foundation and drains will be removed. Building 433 and Building 430, 431 and 432 foundations would be left in place, but would be decontaminated through that scarification to remove the risk associated with these media.

In this alternative the volatile organic compound contaminated soil and groundwater in the north portion of the site would be treated via in situ thermal treatment methods. An estimated 3,700 cubic yards of in situ contaminated soil, and Building 401 foundation concrete would be excavated for off-site

disposal under Alternative 4. This total does not include the volatile organic compound plume soil. A nominal amount of impacted concrete dust from scarification, approximately 80 cubic yards again, would also require disposal.

There is a poster on our website that shows you a little bit more of this in situ treatment and explanation for it.

Finally, Alternative 5. It is similar to Alternative 3 in that soil and road bedding that exceeds the feasibility study preliminary remediation goals and the Building 401 foundation and drains will be removed. Once again, Building 433 and the foundations of Building 430, 431 and 432 would be left in place, but would be decontaminated by scarification to remove the risk associated with these media.

In this alternative the volatile organic compound contaminated soil and groundwater in the north portion of the site would be treated via ex situ thermal treatment methods. Under

Alternative 5 an estimated 3,700 cubic yards of in situ contaminated soil, and Building 401 foundation concrete and approximately 3,300 gallons of impacted groundwater would be excavated/recovered for off-site treatment and disposal and an estimated 3,400 cubic yards of VOC-impacted soil would be excavated for on-site treatment. This total does not include the volatile organic compound plume soil. A nominal amount of impacted concrete dust from scarification would also require disposal.

(Technical difficulty interruption.)

(Off the record.)

[redacted]: We worked through a couple of bugs, so we should be set. Everybody should be seeing the Alternative 5 slide on their screen, so we will get back at it.

All right. So, Alternative 5 is similar to Alternative 3 in that soil and road bedding that exceeds the feasibility study preliminary

remediation goals and the Building 401 foundation and drains will be removed. Building 433 and the foundations of Building 430, 431 and 432 would be left in place, but would be decontaminated by scarification to remove the risk associated with these media.

In this alternative the volatile organic compound contaminated soil and groundwater in the north area of the site would be treated via ex situ thermal treatment methods.

Under Alternative 5, an estimated 3,700 cubic yards of in situ contaminated soil and Building 401 foundation concrete and 3,300 gallons of impacted groundwater would be excavated/recovered for off-site treatment and disposal, and an estimated 3,400 cubic yards of volatile organic-impacted soil would be excavated for on-site treatment.

A nominal amount of impacted concrete dust from scarification, approximately 80 cubic yards, would also require disposal.

We also have a poster of this alternative up on the website so you can see more about

the ex situ treatment.

Each alternative in the feasibility study is evaluated against the balancing criteria for comparison purposes. This slide shows the first four balancing criteria. You can see that Alternatives 2 and 3 have the same rankings and Alternatives 4 and 5 have the same rankings. Alternative 3, removal with building decontamination, is highlighted because it is our preferred alternative.

A comparison of the cost estimates shows that the alternatives range in cost from approximately $23 million to $36 million and the times to complete each alternative vary. You can see from the analysis on the last chart and this chart that Alternative 3 achieves the same level of protectiveness for less money and in the same amount of time as Alternative 2.

I am just going to pause right there for a second, folks, and check the slides one last time. Hold on one second, please.

(Off the record.)

[redacted]: All right. Once again, sorry, folks. We are just working through those kinks. I am going to go over this slide again. We will be on Slide 29 and it is going to talk about the comparative analysis for the alternatives.

A comparison of the cost estimates shows that the alternatives range in cost from approximately $23 million to $36 million and the times to complete each alternative vary. You can see from the analysis on the last chart and this chart that Alternative 3 achieves the same level of protectiveness for less money and in the same amount of time as Alternative 2.

Next we will talk about the preferred alternative. To recap, Alternative 3 is the preferred alternative outlined in the Balance of Plant and Groundwater Operable Units proposed plan. The Corps of Engineers expects the preferred alternative to satisfy the following statutory requirements of CERCLA Section 121(b): One, be protective of human

health and the environment; two, comply with applicable or relevant and appropriate requirements; three, be cost-effective; four, utilize permanent solutions that will preclude any future environmental impact.

Once again, Under Alternative 3, impacted soil, road bedding, and groundwater are removed; the Building 401 foundation and utilities are removed; and Building 433 and the foundations of Buildings 430, 431 and 432 are decontaminated by scarifying.

FUSRAP-related material that is removed will be transported off-site for disposal at an appropriately permitted or licensed disposal facility. Following completion of Alternative 3, the site would be remediated to levels suitable for industrial use. This will be both protective of construction workers and industrial workers.

We will just go over that schedule again that we provided earlier. Once the comment period closes, we will consider the comments received and develop a record of decision.

The preferred alternative may be modified based on any new information acquired during the designated public comment period.

Responses to comments received will be provided in the record of decision, which will identify the selected remedy to be implemented. This is scheduled to be released in 2022.

During fiscal year 2021, we will award an architect-engineer services remedial design and construction oversight contract and begin the work to ultimately clean up the site.

All right. Next we will go ahead and receive comments. The slide up on the screen outlines how we will proceed with taking the comments.

The following operating principles will be in place during the comment portion of the meeting.

To receive your comments on the proposed plan, we will be calling one person at a time in the order that you signed up to comment. Please state your name and affiliation or town

of residence.

Please keep your phone line muted until your name has been called.

Please keep the subject of your comments to the proposed plan and limit your comment to under three minutes.

Please indicate when you are finished with your comment.

Questions placed in the chat box will be responded to on the project website before the end of the public comment period.

If you did not sign up early to provide comments tonight and you would like to provide a comment, please use the chat feature when asked to do so to type in your name and indicate that you would like to comment.

We will leave the meeting open for 15 minutes after the closing comments for those that want to chat in questions or additional comments.

[redacted]: Okay. Good evening everyone. No one actually signed up to comment. So in order for me to see the chat,

the names, I have to stop sharing for a minute my screen. So if anyone would like to provide a comment on the proposed plan and the preferred alternative, please put your name in the box, in the chat box, so that I can call your name. I am going to unmute all the lines.

[redacted]: [redacted] would like to comment.

[redacted]: [redacted] would you please state your name and unmute -- well, unmute your mic, state your name and then state your affiliation and then you can unmute your mic and provide your comment. [redacted], you may still be muted. Okay. [redacted] you can't push *6.

You are going to have to do the unmute button, that circle on the bottom of your screen. Perhaps if you can tell me the number you are calling from, I will be able to find you. I need the last two digits and I should be able to unmute your mic.

[redacted]: There we go. Can you hear me now, [redacted]?

[redacted]: Yes, [redacted]. Thank you.

[redacted]: Okay. Just before I comment, is there anyone from EPA participating this evening?

[redacted]: I can say that someone from EPA has registered for the meeting. I cannot tell because some people just called in and they did not enter their names on the list whether someone from EPA is on the line.

[redacted]: Okay. Well, regardless, I will just run through a couple of quick comments. The proposed plan -- can I start now, [redacted]?

[redacted]: [redacted], no. I need you to state your name -- your full name and your affiliation or your town of residence for the court reporter's records.

[redacted]: Okay. [redacted], [redacted], resident of Lewiston, New York. Can I start my comments now?

[redacted]: Yes, [redacted]. You may.

[redacted]: Okay. The property history starts in the proposed plan at 1944.

The proposed plan should reflect the use of the property before it was seized by the federal government. The map on page 20 of the proposed plan I think misleads agencies -- agency personnel, whose concurrence will be required for this plan.

If it does not reflect the locations of the residences and the schools and the walleye hatchery, I think it is misleading to suggest that there is a disposal facility to the north because it has been closed for five years and there is one operating to the east, but the property uses to the west do not transition through a commercial or park-like setting to residences or schools.

And from that standpoint, the industrial level cleanup standard and depending on what is found in the buildings to determine whether or not there would be any additional cost to remove those is a significant issue.

We keep talking about the adequacy of the health standards for construction workers, as opposed to residents and even worthy property

used for a park. I think that would concern most people in the community. I also think it is important to explain to the community how the industrial level cleanup differs from the other standards of cleanup.

While I don't think the community would expect that the federal government would be able to restore the property to the condition in which it was before it was seized by the federal government, certainly the community ought to at least have the benefit of knowing what the other standards are and what kind of property uses that would provide as options to the town, you know, 10 or 20 years down the road. That is pretty important.

Last, but not least, the groundwater issue, the DNAPL in the northwest section of Niagara Falls Storage Site, I would encourage the Army Corps groundwater people to consult with EPA because there was a dispute about the groundwater direction on the property adjacent to the north of the Niagara Falls Storage Site during the adjudicatory process for the CWM

permit.

The EPA agreed with the experts for Niagara County in the probability that the lower aquifer was not traveling northwest, but on the southern part of the CWM property was traveling west, southwest.

So there are two concerns; one, that if the Army Corps remediates the DNAPL, that it won't show up again if it is migrating from CWM and then of course, number two, whether or not federal taxpayers should be bearing the cost for historical contamination that was from a private property operation and not the federal operation. I think that is it.

I just want to reiterate how important it would be for the Army Corps to discuss the DNAPL evaluation, which is brand new because in contrast to Modern and the Niagara Falls Storage Site, there were wells missing on CWM that have only been installed fairly recently so there is not a lot of data.

But, to reiterate, the EPA and the experts for Niagara County had a different opinion

than DEC and CWM. So again, I would encourage the Corps to talk directly to EPA about the DNAPL on the site to the north and if a potentially responsibile party process is called for, look for ways to get that done without delaying the good progress that is being made on BOP and the IWCS. That concludes my comments. Thank you.

[redacted]: Thank you, [redacted]. Is there anyone else that would like to chat their name in the comment box to provide additional comments?

Okay. One more time I am going to unmute the lines just to try and see if there is someone that does not have the ability to unmute their mic to -- that wants to provide a comment.

For those of you that are receiving feedback on your line, if you move your phone away from your computer so that they are not so close and you turn down the sound on your computer, it should get rid of the echo.

Okay. I am going to ask one last time is

there anyone else that would like to provide comments? Please provide your name in the chat.

Okay. Then I am going to go to [redacted], who has been monitoring the chat to see if there were any questions in the chat that someone wanted answered.

[redacted]: Hi, [redacted] There weren't any.

[redacted]: Okay. Steve, would you flip to the next slide, please? So, if anyone decides that they would like to provide comments, you can e-mail your comments to fusrap@usace.army.mil. The mailing address to mail comments to is up on the screen; U.S. Army Corps of Engineers, Buffalo District, Environmental Project Management Section, 1776 Niagara Street, Buffalo, NY 14207. Please put Niagara Falls Storage Site in the subject line if you send us an e-mail.

[redacted] would you go to the next slide, please? Additional information can be found on the web and this is our website for the

site. Also, I want you to know that this presentation with the script is posted to the website. There is a fact sheet about the preferred alternative and the proposed plan on our website and we will be posting the transcript to the meeting once it is available and if you send us any questions to the fusrap@usace.army.mil e-mail address, we will also be posting responses to those questions up on the website.

So, with that, we are going to go back a slide so that you can copy the address if you need to and we are going to leave the meeting open for the chat for the next 15 minutes in case anybody wants to chat any additional comment.

So it is currently -- we will be closing the meeting at 8:15. The Project Delivery Team will not be staying on the line to answer any questions that come up in the chat, but we will be copying the chat and we will be responding to those questions online.

So, thank you everyone. I am going to now

officially end the meeting, but leave the chat open for 15 minutes. Thank you for participating in our meeting tonight.

(Meeting concluded at 7:58 p.m.)

STATE OF NEW YORK)

) ss.

COUNTY OF ERIE)

I, [redacted], Notary Public, in and for the County of Erie, State of New York, do hereby certify:

That the public hearing was taken pursuant to notice at the time and place as herein set forth; that said public meeting was taken down by me and thereafter transcribed into typewriting, and I hereby certify the foregoing is a full, true and correct transcription of my shorthand notes so taken.

I further certify that I am neither counsel for nor related to any party to said action, nor in anyway interested in the outcome thereof.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my seal on this 27th day of October, 2020.

[redacted]