

Sundquist, Jon

Subject: FW: Hempstead ISS- NE Areas Utility Clearances and Schedule

From: John Spellman [<mailto:jtsPELLM@gw.dec.state.ny.us>]
Sent: Friday, August 23, 2013 2:47 PM
To: Van Rossem, Patrick J.
Subject: Re: Hempstead ISS- NE Areas Utility Clearances and Schedule

Hi Pat,

The Department of Environmental Conservation approves of your proposed minor design change.

It looks like the 8 column decrease only accounts for work directly under the line; additional columns removed from the design scope to comply with OSHA power line safety - equipment operations (i.e., offset distance) is acceptable.

Thanks,

John

John Spellman, P.E.
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(518) 402-9686

>>> "Van Rossem, Patrick J." <Patrick.VanRossem@nationalgrid.com> 8/23/2013 12:18 PM >>>

John,

As discussed we have been working closely with LIPA, Verizon and the LIRR for several years to coordinate the relocation of their lines to allow us to remediate the Northeast Areas. The Verizon line was recently removed, the LIRR communications line is scheduled to be relocated soon, also LIPA has agreed to temporarily remove their two 13 KV lines, and temporarily remove all but one of their 69 KV lines. The one 69 KV line needs to remain intact as it is critical for one 69 KV line to remain available to help maintain the electrical integrity for the LIPA system- without this line intact a system failure in the Hempstead area could result in a major extended electrical outage for a large part of the area and it could take several days possibly to get the lines reinstalled and back into service. LIPA is also concerned about the soft ground conditions from the ISS work in that area exacerbating any emergency restoration that could become necessary. By leaving the one easternmost 69 KV line up adjacent to the Ford property, we will be able to solidify all of the design area except for about 8 columns (approximately 340 cubic yds.- see attached figures) which is a small percentage of the NE area columns and only a small fraction of the approximately 4000 columns for the entire project.

The boring logs for this area do not show anything indicating there is recoverable material in this area and there should be even less material near the eastern edge of the targeted area where we won't be reaching under the one 69 KV line. In addition, the planned O2 system to be installed on Intersection Street will be available for this small area and for other areas along the LIRR ROW after we complete the ISS project. We are aiming to start the work in the NE Areas around September 9th. Please let me know if you have any other questions or comments. Thanks.

Pat

Pirog, Rob

From: Sundquist, Jon
Sent: Tuesday, May 20, 2014 2:27 PM
To: Pirog, Rob; Monti, Amy; White, Kirk
Subject: FW: Hempstead MGP Site- Revised Estimate of ISS Treatment Volume
Attachments: Adjustment of treatment volumes letter_rev2_1.pdf

-----Original Message-----

From: Lech Dolata [mailto:lxdolata@gw.dec.state.ny.us]
Sent: Thursday, October 11, 2012 3:01 PM
To: Patrick J. Van Rossem
Cc: Mark McCabe; Michael Hewitt; Amen Omorogbe; Theodore O. Leissing; Sundquist, Jon
Subject: Re: Hempstead MGP Site- Revised Estimate of ISS Treatment Volume

Pat,

National Grid's proposal addressing the change of depth of the In-Situ Solidification (ISS) process at the Hempstead MGP site described in your email below and further discussed in the attached URS's letter was reviewed by the Department.

It is understood that the proposed reduction of the depth of solidification to 33 feet below the working platform is dictated by equipment limitations and solidification of MGP waste below that depth is not feasible. However, lowering the elevation of the working platform in certain areas (shown in the attached Figure) up to 4 feet is expected to improve effectiveness of the ISS operations. Since boring logs documenting distribution of the contamination in the "deep pocket area" indicate the presence of scattered, relatively small pockets of tars, URS estimated that approximately 98% of the design volume of soil will still be solidified even if the depth of solidification is reduced to 33 feet below the elevation of the working platform. The existing groundwater oxygenation systems are expected to intercept potential future contributions from the small, untreated deeper soil.

Based on these considerations, NG's proposal to reduce the depth of ISS in areas shown in the attached Figure is acceptable to the Department.

NG's proposal regarding return of the ISS spoils to the over excavated areas is still under review. The results of this review will be conveyed to you in a separate communication. If you have any questions regarding the above determination, please contact me at (5228) 402-9662.

Lech M. Dolata
Project Manager
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>>> "Van Rossem, Patrick J." <Patrick.VanRossem@nationalgrid.com> 10/9/2012 10:48 AM >>>
Lech,

As a follow-up to our August 23, 2012 meeting with you regarding the status of the Hempstead ISS project, following is our proposed plan for completing the project following extensive discussions with the ISS contractor. The contractor has indicated that it is willing to complete ISS columns to a maximum of 33 feet in length instead of the 30 feet that they had previously indicated. Based on the calculations from the attached letter from URS, this 3 foot increase in column length provides a significant improvement which will allow us to complete approximately 98% of the ISS design volume instead of the 93% that we discussed during our August 23rd meeting. Following are the key elements of the plan based on the attached letter and figure from URS:

- 1) Based on the contractor now agreeing to 33 feet, the smaller areas shown in green and tan (deep pocket) are the areas that will not be completed to the design ISS treatment depths.
- 2) For the green shaded areas, these areas will instead receive an approximately 1 to 4 feet of additional over excavation such that treatment would extend to up to 37 feet below the design working surface elevations (representing approximately 40-43 feet below original grade elevation). Treatment of these areas to this depth will still provide significant environmental benefit in the context of the overall remedy and will provide approximately 33 feet of ISS solidified soil above remaining deeper impacts that are not reachable.
- 3) The deep pocket area (tan area) will be treated to 33 feet below the design working surface. At depths lower than this, the soil is relatively clean - the contaminated zone that was used to define the much deeper total depth of treatment does not start again until greater depths. Thus treatment to 33 feet will allow solidification of the reachable shallow contamination in this area.
- 4) The majority of the purple shaded area will be treated to the design depths as described in the URS letter attached.
- 5) We discussed the Area #3 portion of the purple shaded area in the NW part of the Site at the August 23rd meeting. URS reviewed the boring logs again for this area and they have determined that the boring logs do not exhibit contamination below 32 feet below ground surface, and thus in all cases the contamination would be less than 28 feet below excavation surface since a minimum of four feet of soil has been excavated. Accordingly the original target treatment depth for this area was overly conservative and therefore treatment to 30 feet below excavation surface would treat the MGP source material in this area.

The existing and proposed groundwater oxygenation systems will be available to address any potential future contribution from the approximately 2 % of untreated deeper soil volume. We are available to discuss this or meet with you at your convenience. Your feedback is requested soon so that the ISS work moving to the north can continue without interruption. Thanks.

Pat

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Pirog, Rob

From: Van Rossem, Patrick J. <Patrick.VanRossem@nationalgrid.com>
Sent: Tuesday, February 05, 2013 3:29 PM
To: Hewitt, Michael; McCabe, Mark; Gardner, Mike; Sundquist, Jon; White, Kirk; Pirog, Rob
Subject: FW: Hempstead ISS- Excavation Work Plan for Columns 940-965
Attachments: Trench Excavation Figure.pdf

FYI DEC approval below.

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-----Original Message-----

From: Lech Dolata [mailto:lxdolata@gw.dec.state.ny.us]
Sent: Tuesday, February 05, 2013 3:25 PM
To: Van Rossem, Patrick J.
Cc: Amen Omorogbe; Scott Deyette; Vignesh Rajagopalan
Subject: Re: Hempstead ISS- Excavation Work Plan for Columns 940-965

Pat,
This email confirms our conversation today regarding treatment of an area which was not subjected to solidification by an ISS equipment. The proposed excavation of the untreated area, as outlined in the attached drawing, is acceptable to the Department. Please proceed with the filed work.

Lech M. Dolata
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>>> "Van Rossem, Patrick J." <Patrick.VanRossem@nationalgrid.com>
>>> 2/1/2013 10:06 AM >>>
Lech,

We feel that bucket mixing could be successfully used for this application considering the recent success we've had with bucket mixing at several sites upstate including our Hiawatha Blvd. site where we bucket mixed to 26 feet bgs. Tony Karwiel was the DEC PM for that project, and my understanding is that DEC was satisfied with the results at this and

other sites where we have recently used bucket mixing. Also Jon Sundquist from URS is familiar with the Plattsburgh project that you referenced and he feels that there were some different circumstances at Plattsburgh compared to Hempstead where the sand/gravel formation is well defined. Jon and I can discuss this more with you when you are available.

The referenced area can not be auger mixed because the columns have hardened which prevents the ability to overlap the columns. The second batch plant will be going back into service soon with the other drill rig getting repaired, and we are now proposing to excavate this area instead as detailed below:

A Linkbelt 330 Hydraulic Excavator (or equivalent with an extended boom) equipped with a 30 inch size bucket will be utilized for the excavation work and will excavate the untreated material between the existing columns. As shown on the attached Figure, the entire length of the unmixed area is 180 feet. Each grid plot will be sized and field surveyed. The grids 6001 through 6006 are based on a trench width of 8 feet while grids 6007 through 6010 are based on a 6.5 foot width. These are the maximum potential widths of each section. Based on the exploratory excavation work to date, it is anticipated that the actual widths will be less (~3-4 feet). Grid sections range from approximately 15 to 20 feet in length and will be used to check proper alignment of the trench.

The excavation will be completed from one end of the trench to the other at full depth. Excavated material will be direct loaded into trucks for offsite disposal whenever possible. If necessary, some excavated material may be temporarily stockpiled to facilitate continuous excavation and loadout activities. Existing column sidewalls will be shaved to provide a path for the excavator bucket to advance to full depth and remove the impacted material from the sidewalls. This will be a controlled activity to maintain the integrity of the previously mixed columns. This will be a scraping operation and not a cutting operation from a safety perspective and to maintain the integrity of the columns. The depth of the excavation will be verified by use of markings on the excavator boom and/or tape measurements. Once a substantial portion of the trench has been excavated (~30%), backfill operations can start from the open end. This will allow time for the excavation to get ahead of the backfill and will provide a space between the two operations to minimize commingling of the clean backfill. Backfilling will start in the "wet" below the water table. Once above the water table, the material will be placed and compacted with the excavator. The backfill will advance to an elevation about 2-5 feet below the top of the adjacent treated columns. The remaining top 2-5 foot area will be backfilled with flowable fill and/or grout to solidify the top of the entire trench. A nominal 18 inch high containment berm using on-site surface soils will be constructed around the perimeter of the trench. As such, storm water pumping and/or diversion facilities will not be needed for this work. Odor control equipment and personnel will be available throughout the excavation operation. It is anticipated that the excavation and backfill work can be completed in 5 days. Thanks.

Pat

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-----Original Message-----

From: Lech Dolata [mailto:lxdolata@gw.dec.state.ny.us]
Sent: Friday, January 25, 2013 1:49 PM

To: Van Rossem, Patrick J.
Cc: Amen Omorogbe; Scott Deyette; Vignesh Rajagopalan
Subject: Re: Hempstead ISS- Bucket Mixing Work Plan for Columns 940-965

Pat,

Upon review of ENTACT's proposal to use bucket mixing method for solidification of soil in the area of columns 940-965, it was determined that this method is unacceptable to the Department. This determination was based on the following considerations.

1. Bucket mixing used at the Saranac MGP in Plattsburgh for construction of the Stabilized Soil Barrier Wall demonstrated unsatisfactory mixing of soil and stabilizing slurry at the bottom elevations. The mixing took place to a depth between 6 and 20 ft. Several lenses of a non-homogeneous, tar leaching wall material were found after the wall was exposed during excavation.
2. The enhanced sampling effort does not offer any guarantee that poorly mixed soil/cement pockets have not been created.
3. In the past, the Bureau staff reviewed a bucket mixing proposal for an ISS project and this proposal was rejected based on the quality of mixing process concerns. The depth of mixing was considerably lower than the mixing depth required at the Hempstead site.

Please call me at (518) 402-9662 if you have any questions.

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>>> "Van Rossem, Patrick J." <Patrick.VanRossem@nationalgrid.com>

>>> 1/24/2013 11:49 AM >>>

Lech,

Attached is the plan from ENTACT to use bucket mixing to solidify the area of columns 940-965. They are proposing bucket mixing because these columns have hardened and this is preventing the overlaps for new columns in this area without damaging augers and/or the drill rig. The figure attached with ENTACT's plan shows these columns located more towards the center of the ISS area and away from the edges. URS is proposing a higher sampling rate (attached) to properly monitor the quality of this work, and URS, AECOM and the on-site DEC rep. will be on-site to actively monitor this work. Bucket mixing in this area should be a straightforward process to complete because the work will be performed in a cohesive sand and gravel formation, and within an area surrounded by cured cemented columns which will help to stabilize the sidewalls and define the ISS treatment area. The Contractor asked us at the weekly meeting yesterday if we could provide some feedback on this soon as they are interested in completing this work next week while one of their batch plants is available during the repair of the Del Mag RH-40 drill rig. Please call me to discuss this after you complete your review. Thanks.

Pat

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