MACTEC Engineering and Consulting, P.C.
Shipping Address: 511 Congress Street, Portland, Maine 04101
Postal Address: P.O. Box 7050, Portland, Maine 04112
Telephone: (207) 775-5401 Facsimile: (207) 772-4762

REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 01
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:** 3/20/2018
		Date Information Required: 4/16/2018
Client:	NYSDEC, Site No. 516008	**Date Information Provided:** 04/25/2018
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No

REQUEST		
Information Requested: In accordance with Generic Effluent Criteria for Surface Water Discharges (NYSDEC Memorandum Dated August 2013), LRI is requesting that effluent monitoring be limited to the site-related priority pollutants of concern, identified as VOCs (Benzene, Toluene, Ethybenzene, and Xylene) in the Record of Decision (NYSDEC, March 2015) and conventional water quality parameters (i.e., pH, TSS, and TDS).		
Relevant Design Documents: Spec Section 02 72 00, Attachment Effluent Discharge Criterion to Surface Waters. Limited Site Data – Attachment C (ROD)	**Attachments:** ☒ Yes ☐ No	
RFI Originator: Lisa Gorton	**Initial:** LAG	**Date:** 3/20/18

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RESPONSE		
RFI Received By: Mark Stelmack	**Initial:** MJS	**Date:** 3/20/18

MACTEC Response:

Surface water effluent discharge monitoring shall be in accordance with the requirements stated in the "Saranac Lake Gas Co., DER Site # 516008 Permit Equivalent" dated April 16, 2018 (Attachment 1), prepared by NYSDEC Division of Water, and with the associated requirements described in the construction water management sections of LAND's Submittal 002B-Construction Work Plan including MACTEC's review comments, and in Submittal 006A Field Sampling and Analysis Plan & QAPP including MACTEC's review responses.

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	04/25/2018
M. Peters	Remediation Engineer		
T. Gerhard	Project Engineer	TNG	04/25/2018
J. Bowman	Resident Inspector		
J. Welch	Remediation Engineer		
J. Ricardi	Chemist		

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Attachment 1: Saranac Lake Gas Co., DER Site # 516008 - Permit Equivalent

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

M E M O R A N D U M

TO: Michael Cruden, Division of Environmental Remediation

FROM: Carol Lamb-LaFay, Division of Water

RE: Saranac Lake Gas Co., DER Site # 516008 – Permit Equivalent

Date April 16, 2018

In response to the request dated April 11, 2018, attached please find effluent limitations and monitoring requirements for the above noted remediation discharge. Discharge from OU2 (250 GPM) to Brandy Brook and OU3 (100GPM) to Pontiac Bay is hereby approved under the following conditions:

1. Discharge shall be from two modular temporary water treatment systems designed to treat the construction water prior to discharge. Each treatment system will consist of the following major components: settling, oil/water separation, bag filters, activated carbon, transfer pumps (various submersible and transfer), effluent storage tank (21,000-gallon Frac Tank), flow meter, and discharge point.

2. Authorization to discharge from the effluent storage tank shall become effective upon review and approval of sampling results by the Department and Engineer demonstrating that the treatment and management practices have achieved compliance with the enclosed effluent limitations for site specific contaminants of concern. Representative samples shall then be collected every three days with 24-hour turnaround time, after approval to discharge.

3. The discharge complies with the effluent limits and conditions of the attached permit equivalent.

DER will be responsible for ensuring compliance with the attached effluent limitations and monitoring requirements, and approval of all engineering submissions. Footnote 1 identifies the appropriate DER Section Chief as the place to send all effluent results, engineering submissions, and modification requests. The Regional Water Engineer should be kept appraised of the status of this discharge and, in accordance with the attached criteria, receive a copy of the effluent results for informational purposes.

If you have any questions, please call Brian Baker at 402-8124.

Attachments

ecc: J. Zalewski, Region 5
R. Streeter, Region 5
B. Baker, DOW

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning April 15, 2018 and lasting until April 15, 2019

The discharges from the OU2 treatment facility to Brandy Brook and the OU3 treatment system to Pontiac Bay shall be limited and monitored by the operator as specified below:

Outfall and Parameters **Outfall 001 – Remediation Wastewater**	**CAS No.**	**Limitations Daily Max.**	**Units**	**Minimum Monitoring Requirements**		**FN**
				Measurement Frequency	**Sample Type**	
Flow	NA	Monitor	GPD	Continuous	Meter	
pH (range)	NA	6.5 – 8.5	SU	Footnote 1	Grab	
Oil and Grease	NA	15	mg/l	Footnote 1	Grab	
BOD, 5-day	NA	5	mg/l	Footnote 1	Grab	
Solids, Total Suspended	NA	10	mg/l	Footnote 1	Grab	
Solids, Total Dissolved	NA	200	mg/l	Footnote 1	Grab	
Acenaphthene	83-32-9	5.3	µg/l	Footnote 1	Grab	
Acenaphthylene	208-96-8	10	µg/l	Footnote 1	Grab	
Anthracene	120-12-7	3.8	µg/l	Footnote 1	Grab	
Benz(a)anthracene	56-55-3	0.05	µg/l	Footnote 1	Grab	2
Benzene	71-43-2	1	µg/l	Footnote 1	Grab	
Benzo(b)fluoranthene	205-99-2	0.07	µg/l	Footnote 1	Grab	2
Benzo(k)fluoranthene	207-08-9	0.02	µg/l	Footnote 1	Grab	2
Benzo(a)pyrene	50-32-8	0.09	µg/l	Footnote 1	Grab	2
Benzo(ghi)perylene	191-24-2	10	µg/l	Footnote 1	Grab	
Chromium	NA	50	µg/l	Footnote 1	Grab	
Chrysene	218-01-9	0.6	µg/l	Footnote 1	Grab	2
Dibenz(a,h) anthracene	53-70-3	0.1	µg/l	Footnote 1	Grab	2
Endosulfan	115-29-7	0.009	µg/l	Footnote 1	Grab	
Ethylbenzene	100-41-4	4.5	µg/l	Footnote 1	Grab	
Fluoranthene	206-44-0	50	µg/l	Footnote 1	Grab	
Fluorene	86-73-7	4.8	µg/l	Footnote 1	Grab	
1,2,4-Trimethylbenzene	NA	5	µg/l	Footnote 1	Grab	

Outfall and Parameters Outfall 001 – Remediation Wastewater	CAS No.	Limitations Daily Max.	Units	Minimum Monitoring Requirements		FN
				Measurement Frequency	Sample Type	
Heptachlor epoxide	1024-57-3	0.2	µg/l	Footnote 1	Grab	2
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	µg/l	Footnote 1	Grab	2
Isopropylbenzene	98-82-8	2.6	µg/l	Footnote 1	Grab	
Lead	NA	4	µg/l	Footnote 1	Grab	
Naphthalene	91-20-3	10	µg/l	Footnote 1	Grab	
Phenanthrene	85-01-8	50	µg/l	Footnote 1	Grab	
PCB-1016	12674-11-2	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1221	11104-28-2	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1232	11141-16-5	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1242	53469-21-9	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1248	12672-29-6	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1254	11097-69-1	0.20	µg/l	Footnote 1	Grab	2,3
PCB-1260	11096-82-5	0.20	µg/l	Footnote 1	Grab	2,3
Pyrene	129-00-0	4.6	µg/l	Footnote 1	Grab	
Toluene	108-88-3	5	µg/l	Footnote 1	Grab	
1,2-Xylene	95-47-6	5	µg/l	Footnote 1	Grab	
1,3-Xylene	108-38-3	5	µg/l	Footnote 1	Grab	
1,4-Xylene	106-42-3	5	µg/l	Footnote 1	Grab	
Zinc	NA	66	µg/l	Footnote 1	Grab	

Footnotes:

1. Samples must be collected and analyzed for all parameters prior to the initial discharge event. Discharge may not commence until the sample results show compliance with the above effluent limitations. Representative samples shall then be collected every three days with 24-hour turnaround time, after approval to discharge. Requests for modification of the listed parameters or monitoring frequency must be submitted to DOW to modify this permit equivalent. All monitoring data, engineering submissions, and modification requests must be submitted to:

   Sarah Saucier, DER,
   625 Broadway, 12th Floor
   Albany, NY 12233

With a copy sent to:

Regional Water Manager, Region 5
232 Golf Course Road
Warrensburg, NY 12885-1172
Phone: (518) 623-1200

2. Discharge limit is set at the Practical Quantitation Limit (PQL) of the most sensitive USEPA approved method as the water quality standard is below this limit. Analysis of this parameter shall utilize the most stringent USEPA approved method in accordance with 40 CFR 136.

3. For PCBs:
   a. The contractor must monitor this discharge for PCBs using USEPA laboratory method 608. The laboratory must make all reasonable attempts to achieve a Minimum Detection Level (MDL) of 0.065 µg/l.
   b. 0.065 µg/l is the discharge goal. The contractor shall report all values above the MDL (0.065 µg/l per Aroclor). If the level of any Aroclor is above 0.65 µg/l, the treatment must evaluate the treatment system and identify the cause of the detectable level of PCBs in the discharge and propose additional measures for review and Department approval.
   c. If the Department determines that the detectable level of PCBs can be prevented by implementation of additional measures, the contractor shall implement such additional measures within 7 days of receipt of written notification.

4. If any effluent sample exceeds the effluent limitation by 20% or higher or exceeds the effluent limitations for multiple parameters, a second sample must be taken within 24 hours. If exceedance(s) of the effluent limit(s) is confirmed with the follow up sample, the discharge must cease until the treatment system evaluation is completed and any issues addressed. In the event that four (4) effluent samples in any 6-month period exceeds the effluent limitation by less than 20%, the discharge must cease until the treatment system evaluation is completed and any issues addressed.

5. Only waters generated at this site are authorized for treatment and discharge.

6. Samples and measurements, to comply with the monitoring requirements specified above, must be taken from the holding tank prior to discharge to the receiving waterbody.

7. Discharge is not authorized until such time as an engineering submission showing the method of treatment and discharge is approved by the Department. The discharge rate may not exceed the effective treatment system.

8. Any use of corrosion/scale inhibitors or biocidal-type compounds, or other water treatment chemicals used in the treatment process must be approved by the Department prior to use.

9. This discharge and administration of this discharge must comply with the substantive requirements of 6 NYCRR Part 750.

10. No bypass of the wastewater treatment system is authorized.

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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.: 02 (Revised Response)**	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:**	04/19/2018
		Date Information Required: 05/02/2018	
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**	8/7/2018
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**	
MACTEC Project No.:	3611181219	☒ Yes, FO No. 2 ☐ Yes, CO No. ___ ☐ No	

REQUEST			
Information Requested: When dredging at the land-water interface, the contract directs LAND to leave a wedge of sediment to prevent sheering of the shoreline and place a barrier/demarcation layer (barrier layer). In wedge areas where MGP waste is potentially present, application of a barrier/demarcation layer (barrier layer) may need to be applied to minimize any future impacts. LAND has requested clarification on whether the extent of the barrier layer can be determined based on visual inspection or in areas most likely to have residual contamination due to proximity to the brook outfall.			
Relevant Design Documents: Contract Drawings C-407 through C-409		**Attachments:**	☐ Yes ☒ No
RFI Originator:	Lisa Gorton	**Initial:** LAG	**Date:** 04/19/2018

RESPONSE (REVISED)			
RFI Received By:	Tom Gerhard	**Initial:** TG	**Date:** 04/23/2018

MACTEC Response:

This response to RFI 02 shall replace the previous responses provided by MACTEC on May 2 and July 20, 2018.

The application of the barrier/demarcation layer (barrier layer) shall be placed along the shoreline where the design dredge area steps out to a 7.5 foot depth. This includes dredge areas 13, 14, 15, 16, 17, and 18. Prior to placing the barrier layer, documentation sampling shall be collected starting at the western edge of excavation area 13 and every 50 linear feet along the shoreline.

Aquablock will be placed along the shoreline of dredge areas 9 and 10. No sampling will be conducted in these areas.

Collection of documentation samples shall use the core method as described in Section 01 45 28 of the contract specifications. Documentation sampling shall be submitted to the laboratory for analysis of parameters identified in the

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project Sediment Cleanup Objectives. Documentation samples will be used solely to document residual contamination but not to determine the extent of placement of the barrier layer.

The area described above is likely impacted shoreline area based on its proximity to the culvert where Brandy Brook discharges to the Lake and identification of sheens during dredging. Therefore, remaining contaminants within this wedge is being mitigated with a barrier layer to minimize any future potential impacts.

MACTEC has identified Aquablok as the specific barrier/demarcation layer product to be used in Field Order No. 2.

Cost impacts related to the additional sampling are considered to be offset by the reduction in the extent of placement of the barrier layer.

MACTEC Review:

Individual	**Discipline**	**Initial**	**Date**
M. Stelmack, PE	Project Manager	MJS	8/7/2018
M. Peters	Remediation Engineer		
T. Gerhard	Project Engineer		
J. Raimondi	Project Engineer		
J. Welch	Project Engineer	JDW	8/7/2018

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REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 03
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:7/05/2018**
Retaining Wall in Dredge Limits		**Date Information Required: ASAP**
Client:	NYSDEC, Site No. 516008	**Date Information Provided:7/16/18**
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No

REQUEST		
Information Requested: **Land Remediation Inc (LRI) has observed a wood retaining wall within the northern limits of the 3' dredge cut. This is confirmed by the Third-Party Surveyor SY Kim. LRI has not located this existing structure on the drawings or mention of it in the specifications. LRI requests a revised dredge surface detailing the required sloping around this structure or a designated offset to safely dredge required sediment without causing damage to the structure. See attachment.**		
Relevant Design Documents: Spec Section 01 71 33 – Protection of the Work and Property – Protection of Existing Structures – Surface Structures	**Attachments:** ☒ Yes ☐ No	
RFI Originator: Matt Warren	**Initial:**	**Date:** 7/5/18

RESPONSE		
RFI Received By: Mark Stelmack	**Initial:**	**Date:** 7/5/18

MACTEC Response:

1) Provide an offset from face of wall of 2 feet and dredge down to the 3 foot depth with 3:1 slope.
2) During dredging operation, if evidence of MGP waste – odor or sheen – is observed, the demarcation/barrier layer will be placed if directed by the Department and Engineer.

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	7/16/18
M. Peters	Remediation Engineer	MAP	7/12/18
J. Raimondi	Project Engineer		
T. Lewis	Resident Inspector		

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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 04	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:7/17/2018**	
Retaining Wall in Dredge Limits		**Date Information Required: ASAP**	
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**	
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**	
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No	

REQUEST		
Information Requested: **Land Remediation Inc (LRI) has observed a concrete retaining wall at the southern dredge limits. The wall is at risk of structural failure if a vertical cut is taken to start the slope directly adjacent to the wall as shown in the provided dredge surface. LRI requests a revised dredge surface detailing the required sloping around this structure to ensure it's stability while meeting design criteria or a designated offset to safely remove the required sediment without causing damage to the wall or undermining it's structural stability.**		
Relevant Design Documents: Spec Section 01 71 33 – Protection of the Work and Property – Protection of Existing Structures – Surface Structures	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 7/17/18

RESPONSE			
RFI Received By:	Mark Stelmack	**Initial:** MJS	**Date:** 7/17/18

MACTEC Response:

1. Prior to full scale dredging at wall, conduct investigation to see if the wall has a footing.
2. If a footing is present, conduct dredging in accordance with Detail S on drawing C-304 except provide a 2-foot offset from footing.
3. If no footing exists, provide 2-foot offset from wall and dredge down with 3:1 slope.
4. During dredging operation, if evidence of MGP waste – odor or sheen – is observed, the demarcation/barrier layer will be placed if directed by the Department and Engineer.

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	7/20/18
M. Peters	Remediation Engineer	MAP	7/20/18
T. Lewis	Resident Inspector		

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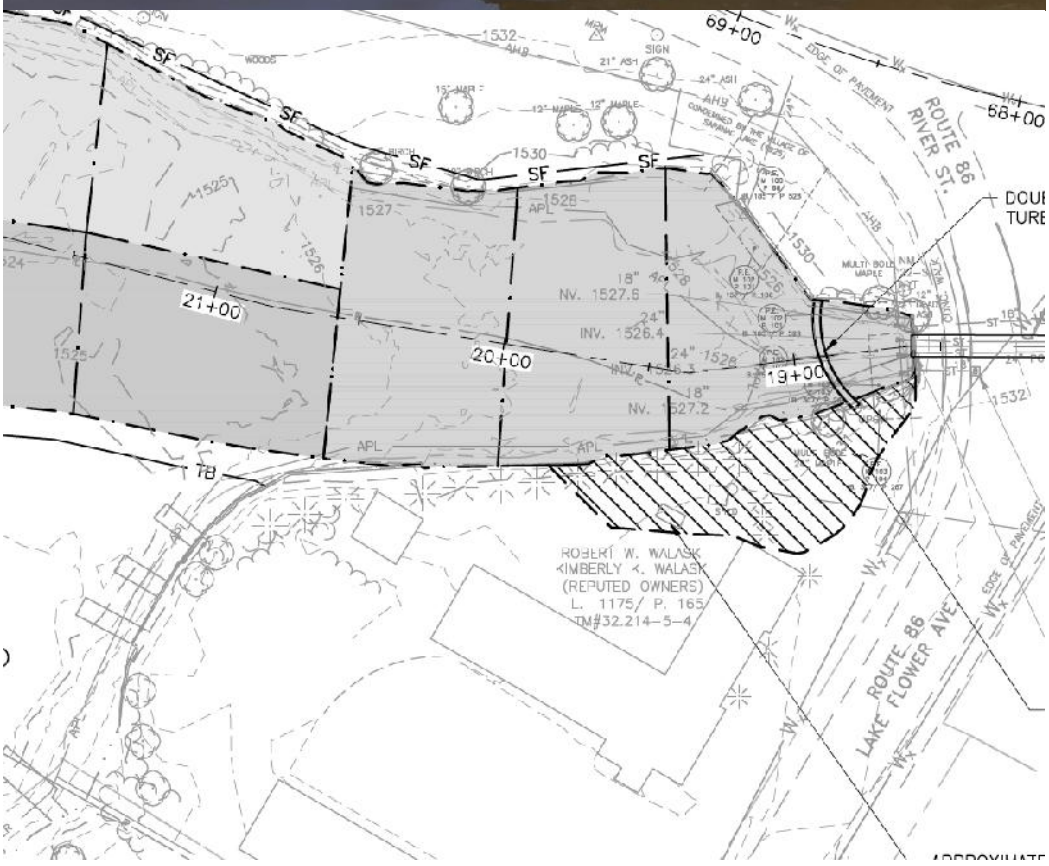

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REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 05
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:7/30/2018**
Well point Water Management		**Date Information Required:** **ASAP**
Client:	NYSDEC, Site No. 516008	**Date Information Provided:** **8/7/2018**
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No

REQUEST		
Information Requested: See Following Pages. In summary, LAND is requesting to discharge well point water without treatment.		
Relevant Design Documents: **Spec Section 31 23 00 – Dewatering** **Spec Section 02 72 00-Construction water Management**	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 7/30/18

RESPONSE		
RFI Received By: Mark Stelmack	**Initial:** MJS	**Date:** 7/31/18
MACTEC Response: Based on review of available groundwater data in the area, and various correspondences on the subject among the project team, the request to discharge well point water without treatment is denied. Well point water shall be treated at the OU2 water treatment facility prior to combining with the bypass water and discharged to the brook. Sampling shall be conducted per the discharge permit.		

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	8/7/2018
M. Peters	Remediation Engineer		
J. Welch	Remediation Engineer	JDW	8/7/2018
T. Lewis	Resident Inspector		

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Land Remediation Inc (LRI) requests review of the management of water collected from the well point system.

RFI #5- Following initial drawdown, LRI Requests approval to discharge the water collected from the well point system directly to the bypass discharge line

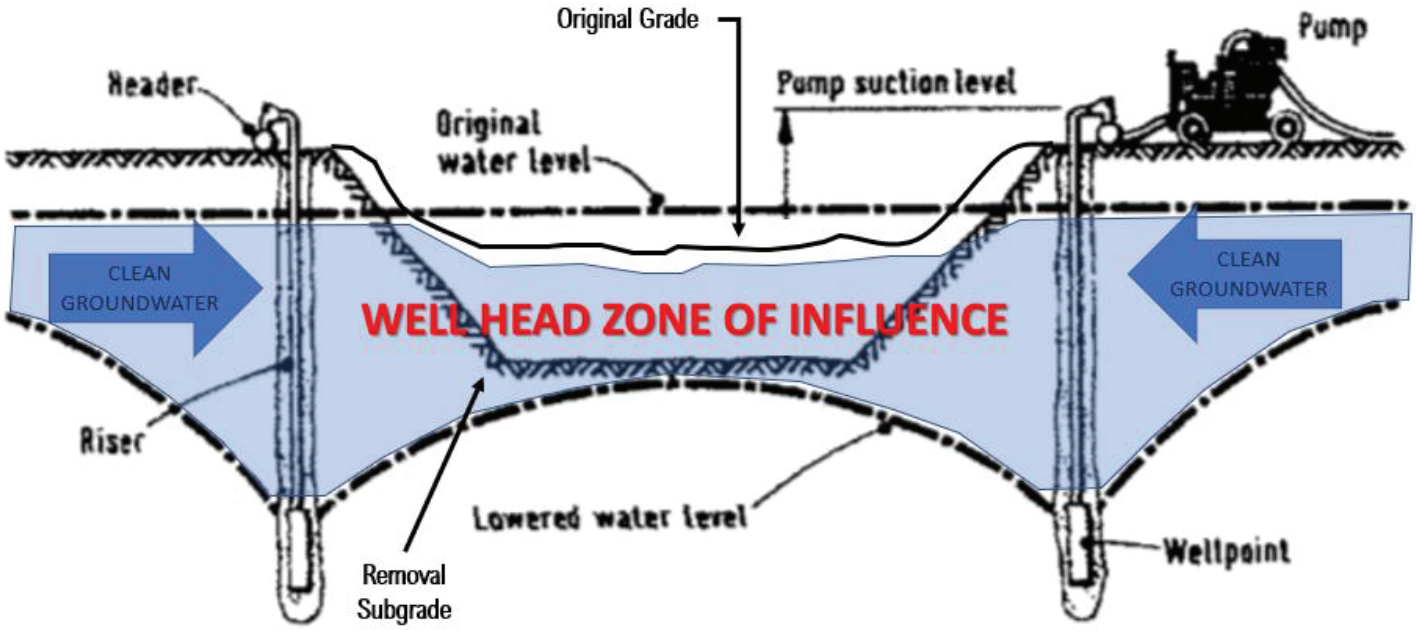
A) The WellPoint system is aligned outside the perimeter of the OU-2 excavation area with well heads installed 10' on center to approximately 9' to 14' below grade. The system will initially collect water from the excavation area as well as outside the impacted ground

B) During the initial drawdown of the well head zones of influence, the collected water will consist of non-impacted groundwater from outside the extents of the excavation as well as groundwater from inside the removal area.

   a. Once the initial drawdown is completed and the localized water table is dropped to below the excavation sub-grade, only the "clean" surrounding groundwater will be collected from the system (Figure 1.)
   b. Surface brook flow will be diverted around the area by the bypass system

C) If needed, a sample of the well point effluent can be taken following the drawdown to prove out the water quality prior to direct discharge.

FIGURE 1.



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REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 06
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:7/31/2018**
Protection of Existing OU-2 Sewer Pipe		**Date Information Required: ASAP**
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. __ ☒ Yes, PCO No. #5 ☐ No

REQUEST		
Information Requested: LAND Remediation requests a revised approach to addressing protection of the sewer line located within the OU-2 excavation area due to structural concerns with attempting to support the pipe as directed in Addendum #1. See following Pages for detail.		
Relevant Design Documents: Drawings C-201, C-402, C-403, and Addendum #1	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 7/31/18

RESPONSE		
RFI Received By: Mark Stelmack	**Initial:**	**Date:**

MACTEC Response:

1. The vitrified clay pipe will be difficult to protect and allow complete excavation of the MGP impacted soil, therefore the existing pipe will be replaced with a PVC pipe as described in PCO #5.

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	8/7/18
M. Peters	Remediation Engineer	MAP	8/7/18
T. Gerhard	Project Engineer		
M. Pugh	Resident Inspector		

MACTEC Engineering and Consulting, P.C.
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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 07	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:8/27/18** **Date Information Required: 9/4/18**	
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**	
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:** ☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No	
MACTEC Project No.:	3611181219		

REQUEST		

Information Requested: The purpose of this RFI is to inquire on the possibility of moving the lakeside extent of the ISS inland by +/- 5-7'. The "wedge" of material forming the buffer would be removed following the ISS. This change would address a few items;
 	
• Cedar Row: The cedar tree root systems are directly in the footprint of the lakeside edge of the ISS as designed. These would have had to be removed prior to mixing in that area regardless. Root removal would likely bring removal of the "wedge" soils as well.
  o With this approach, the root area can remain in place as the buffer and removed following the ISS
• ISS Transmission: create a buffer between the newly placed backfill and ISS operation
  o As designed, the ISS is to be mixed directly abutting the very granular bay backfill.
  o leaving this buffer would provide a better chance of stopping any sub-surface transmission of the cement slurry into the newly placed backfill/ habitat fill.		

Relevant Design Documents: Spec Section 31 32 13 - In-Situ Stabilization Solidification	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 8/27/18

RESPONSE		
RFI Received By: Mark Stelmack	**Initial:** MJS	**Date:** 8/27/18
MACTEC Response: Based on the discussion of this approach on 8/23/18 with NYSDEC, Land Remediation can proceed with this approach. The wedge of material in front of the finished ISS area is to be left in place and not removed.		

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	8/31/18
M. Peters	Remediation Engineer		

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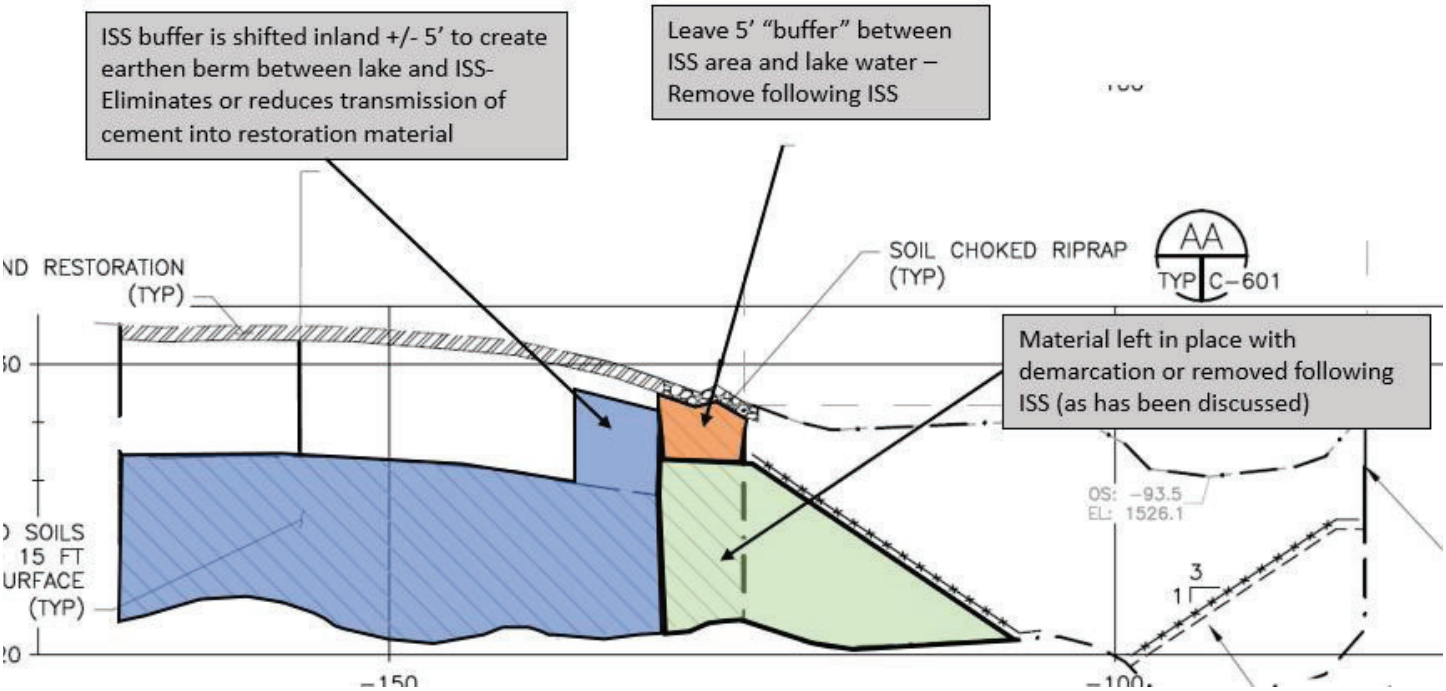
Jason Raimondi	Project Engineer



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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 08	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:9/5/18**	
		Date Information Required: 9/7/18	
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**	
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:** ☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No	
MACTEC Project No.:	3611181219		

REQUEST

Information Requested: The purpose of this RFI is to request approval of the sampling procedure of the imported Bay Backfill and inquire on the possibility of a reduction of the amount of geo-technical samples.

The Bay Backfill material is the Trudeau 2" minus, screened from the bank. Roughly 14,050 CY required

- 2 samples have been submitted and approved thus far;
  - 2 particle size analyses- approved
  - 1- Analytical- approved meeting DER 10 limits
    - 80 sieve shows less than 10% passing, dictating that no analytical is required for this material.
  - Additional 13 particle size analyses required by specification
- 5 additional samples have been taken from various points of the screened pile and have been submitted to the lab for additional particle size analysis. Results expected the week of 9/10
- LRI is requesting
  - Reduction of the particle size testing to 1 every 2000 cy and acceptance of the results of the 7 representative particle size analyses run (2 results submitted and approved, 5 being analyzed now)
    - The screen size, manner of manufacture and source material (Trudeau Bank) will not change.
    - Material is not functioning as a base for structures
    - Suggest visual inspection daily by Engineer for discernable change in material

Relevant Design Documents: Spec Section 31 00 00 - Earthwork		**Attachments:** ☐ Yes ☒ No	
RFI Originator:	Matt Warren	**Initial:** MJW	**Date:9/5/18**

RESPONSE

RFI Received By:	Mark Peters	**Initial:** MAP	**Date:** 9/6/18

MACTEC Response: The proposed sampling procedure is acceptable. The reduction in sampling frequency is also acceptable provided the additional 5 samples show a consistent gradation with the 2 approved particle size submittals and visual inspection shows no change in the material characteristics.

MACTEC Review:

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Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager		
M. Peters	Remediation Engineer	MAP	9/6/18
Jason Raimondi	Engineer		

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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 09- Imported Sample Procedures	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:9/7/18**	
		Date Information Required: 9/12/18	
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**	
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:** ☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No	
MACTEC Project No.:	3611181219		

REQUEST			
Information Requested: The purpose of this RFI is to request approval of suggested modifications to the sampling procedure of the imported materials. The following list of specified materials, sampling status (geo-tech, analytical and supplementary soil health) and requested/ suggested modifications/ clarifications are presented on the following pages o Crushed Stone o Gravel Sub-base o Sub-grade Fill o Stream Bed Types 1 and 2 o Rip Rap o Topsoils ▪ Upland- screened ▪ Wetland- unscreened			
Relevant Design Documents: Spec Section 31 00 00 - Earthwork		**Attachments:** ☐ Yes ☒ No	
RFI Originator:	Matt Warren	**Initial:** MJW	**Date:9/7/18**

RESPONSE			
RFI Received By:	Mark Peters	**Initial:** MAP	**Date:** 9/10/18
MACTEC Response: See attached pages			

MACTEC Review:			
Individual	**Discipline**	**Initial**	**Date**
M. Stelmack, PE	Project Manager	MJS	9/11/18
M. Peters	Remediation Engineer	MAP	9/11/18
Jason Raimondi	Engineer		

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A. Sand

Test	Methodology[1]	Frequency[2]
Sieve Analysis	ASTM C 136	1 test/500 cy

- **N/A**

B. Crushed Stone:

Test	Methodology[1]	Frequency[2]
Sieve Analysis	ASTM C 136	1 test/500 cy

- unclear where this is specified for use?

MACTEC Response: Crushed stone is material for temporary pads, entrances, or erosion control. The approved particle size analysis provided in Submittal No. 073 is sufficient, no additional sampling is required.

C. Gravel Subbase:

Test	Methodology[1]	Frequency[2]
Particle-Size Analysis (to #200 Sieve)	ASTM D 422	1 test/500 cy
Modified Proctor	ASTM D 1557	1 test/source/material

- **Is geo-tech required if pit furnishes DOT certification?**

MACTEC Response: Previous particle size analysis provided in Submittal No. 073 was approved; DOT certification meeting the specified DOT specification is also acceptable.

D. Subgrade Fill:

Test	Methodology[1]	Frequency[2]
Particle-Size Analysis (to #200 Sieve)	ASTM D 422	1 test/2,000 cy
Modified Proctor	ASTM D 1557	1 test/2,000 cy

- **Trudeau Bank Run- +/- 5400 CY**
  - **Submitted;**
    - **1-Geotech- approved**
    - **1-Analytical- approved**
      - **0 analytical required- less than 10% passing the 80 sieve**
  - **Additional sieves required by spec.- 2**
    - **Additional samples taken at 2 different location of the face of the bank- results imminent**
    - **Suggest visual inspection daily by Engineer for discernable change in material**
  - **request utilizing the 3 geo-tech samples taken from different locations along the bank and any additional material utilized over the 6000 cy be based on a visual inspection from the engineer for any discernable changes**

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FYI- The blended and screened products (type 1, type 2, bay backfill) are all made/ processed from the same source

MACTEC Response: This is acceptable with the 3 geo-tech samples taken from different locations along the bank and any additional material utilized over the 6000 cy be based on a visual inspection from the engineer for any discernable changes.

E. Stream Bed (Screened Gravel Type 1A and 4A components):

Test	Methodology[1]	Frequency[6]
Particle-Size Analysis (to #200 Sieve)	ASTM D 422	1 test/1000 cy
Modified Proctor	ASTM D 1557	1 test/1000 cy

- **TYPE 1- Trudeau 2" minus- +/- 466 CY**
  - **Submitted; (Same as Bay Backfill)**
    - **Geotech- approved**
    - **Analytical- approved**
  - **Additional required by spec.- 0**

- **TYPE 2- Trudeau mixing small batch now- +/- 280 CY**
  - **This is a blended material with the Type 1 and Trudeau cobbles**
    - **Requesting visual inspection from the Engineer at the pit to determine if the material meets the intent of the specification. The Type 1 is approved and cobbles will not get picked up with standard geo-tech sieve (see Rip Rap section below)**

MACTEC Response: This is acceptable. MACTEC engineer (Chuck Lyman) shall inspect the stockpile with LRI's superintendent.

F. Riprap:

Test	Methodology[1]	Frequency[2]
Particle-Size Analysis	ASTM D 5519 Method A	1 test/source/material

- **Based on spec. 31 00 00 2.07, assumption is that this is the rounded rock for soil choked topsoil and on bank corners. - +/- 650**
  - **Submitted; 0**
  - **Specification calls for NYSDOT light stone fill (crushed, angular rock)**

A. Riprap shall be used for the shoreline slope protection.

B. Riprap shall be durable stone with soundness characteristics consistent with Item Type A per NYSDOT GCP-14. Stone shall be derived from quarry blasting operations with each stone containing at least two angular faces. Rounded and/or subrounded stone will not be accepted.

C. Riprap shall be well graded meeting the requirements for NYSDOT SS Section 733-22 Stone Filling (Light) material with a mean particle size (d50) in the maximum dimension of 6 inches.

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- **Further discussions with Mactec specified that the shoreline protection was not built using angular rock but was to be rounded rock (3" to 24" dia.) as shown on the restoration drawings**

- **Request waiving of this testing method in lieu of engineer inspection to ensure the Trudeau cobbles meet the intent of the specification.**
  - **Trudeau cobbles are the oversize from the bank run screened to 2" minus leaving 3" and above**
  - **Very wide diameter range (3"- 24")- any random stones delivered over 24" would be removed prior to placement by the backfill crews**

MACTEC Response: MACTEC confirms that rock for soil choked riprap restoration shall be rounded. MACTEC agrees it is acceptable for suitability of cobble material to be determined by visual inspection of stockpile by MACTEC engineer (Chuck Lyman) in the company of LRI's superintendent.

G. Topsoil:

Test	Methodology[1]	Frequency[2]
Particle-Size Analysis [3] (with hydrometer analysis)	ASTM D 422	1 test/2,000 cy (Note 3)
Organic Content	ASTM D 2974	1 test/2,000 cy
pH	ASTM D 4972	1 test/2,000 cy
Soluble Salt Content	ASTM D 4542	1 test/2,000 cy
Soil Nutrient Analysis [4]	(multiple)	1 test/2,000 cy (Note 4)

- **Trudeau Unscreened- +/- 1460 CY**
  - **Status;**
    - **0-Geotech- 1 in for particle size analysis now**
    - **0-Analytical- 1 in for analysis now**
  - **Additional required by spec.-**
    - **0 particle size**
    - **1 for analytical**
      - **1 sample for the *screened* topsoil has been taken- As that product is processed from the unscreened topsoil source, could that analytical also count towards the 2 required from unscreened to meet the DER-10 specified frequency of 1 analysis/ 1000 cy?**

- **Trudeau Screened- +/- 200 CY**
  - **Status;**
    - **1-Geotech -results in- to be submitted**
    - **1-Analytical pending- to be submitted**
    - **1- Cornell soil test- results in- to be submitted**

MACTEC Response: It is acceptable that as soil is processed from the unscreened topsoil source the analytical can also count towards the 2 required from unscreened to meet the DER-10 specified frequency of 1 analysis/ 1000 cy.

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REQUEST FOR INFORMATION

GENERAL INFORMATION			
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.: 1**0- ISS Mixing Technique Modification	
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:10/10/18**	
		Date Information Required: 10/15/18	
Client:	NYSDEC, Site No. 516008	**Date Information Provided: 10/19/18**	
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:** ☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No	
MACTEC Project No.:	3611181219		

REQUEST

Information Requested: The purpose of this RFI is to request approval of a change from the specified auger mixing to skeleton bucket mixing methodology in the In-situ Stabilization area.

After occupying the site and based on further review of the alpine mixing equipment detailed in the construction work plan coupled with the high water levels, LAND Remediation contends that a more even and thorough mix can be achieved using reagent dry placement and bucket mixing. Issues we foresee with the Alpine Mixer are as follows;

- The Alpine mixer is most effective when utilized with a pumped grout mixing technique which is not suitable with the conditions and levels of the site water table. Adding a 1:1 water to cement grout mix will jeopardize the ability to achieve the strengths required.
- Since submitting the work plan, LAND has experienced less than favorable results with attempting to inject "dry" cement into the mix using the Alpine mix unit.
- The mixer would need to be attached to a 400 size excavator and a support excavator would be required as well. This leaves very limited space with the pre-cut, lake, road, equipment and existing structure impeding access.

With the spacial constraints and loose sand soils in the ISS area, LAND believes the placement mechanism of supersacks and mixing with the skeleton bucket will produce;

- By utilizing the skeleton bucket, a more vertically homogenous mix will be attained. Previous experience utilizing this method will blend provides a more homogenized mix within the treatment zone by the shearing action of the skeleton bucket in the soil column
- Utilizing the skeleton bucket will enable LAND to hold the original schedule.

Meeting performance standards is the responsibility of LAND and based on previous ISS experience where this method has been utilized on multiple MGP sites, this change in means and methods will afford the best option to achieve passing strength requirements.

Relevant Design Documents: Spec Section 31 32 13 - ISS		**Attachments:** ☒ Yes ☐ No	
RFI Originator:	Matt Warren	**Initial:** MJW	**Date:10/10/18**

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RESPONSE			
RFI Received By:	Mark Stelmack	**Initial:** MJS	**Date:10/10/18**

MACTEC Response: Based on the additional information provided (Cell Layout Plan and PC quantity calculations) as well as LAND's responses to the questions below, MACTEC approves the modified mixing approach for the ISS. In addition, MACTEC approves a ten-foot buffer between the water's edge and the ISS area, as visual observation of the initial soil excavation in the ISS area indicates that a five-foot buffer would likely fail structurally and collapse.

1. What measures will be in place to assure the proper water to cement mix ratios are being achieved to adequately solidify? By utilizing dry product addition in lieu of wet mixing with grout, the Portland cement reaction with the in-situ water is maximized. To minimize water infiltration the cell will be mixed at the same elevation as the hydrostatic water elevation, this will prevent water infiltration into the cell so only the pore water will be introduced into the mix. No active dewatering will be utilized to prevent water from entering the cell. If additional water is needed because the mix is too thick, potable water from the water truck will be applied using a flow meter to track the volume of water added. The pilot cell will provide a good basis for full scale.
2. How is dust being controlled?- Supersacks will be used with the dry mix/ bucket method- the supersacks are designed with a funnel like structure on the bottom for emptying. This chute will be placed on the ground or in the water/ mix so as to ensure that PC will not fall from height and create a cloud. A full CAMP set up will be operating during the ISS- Water will be misted if additional dust control measures are needed
3. The Construction Work Plan mentions that a figure and a table will be provided with the size, depth, volume, mass, and quantity of PC for each cell. Please provide. - attached
4. It appears the second excavator for debris handling will no longer be used to manage subsurface debris that may be encountered. Please provide a short description of how debris will be managed. - Encountered debris will be removed with the bucket equipped excavator and placed on poly and covered awaiting future disposal.
5. How will water infiltration from lake be eliminated/managed? – based on the answer to question 145 in the bidding process, water from the lake will not be eliminated. The groundwater is used for the dry mix method.
6. Please confirm Land's means and methods are adequate to meet the ISS performance criteria required by the Contract. –The change to the bucket mixing method was proposed as a better alternative to the alpine mixer for the reasons provided in the RFI and was accepted on the follow up phone discussion by MACTEC as a viable option.

MACTEC Review:

Individual	Discipline	Initial	Date
M. Stelmack, PE	Project Manager	MJS	10/19/18
M. Peters	Remediation Engineer	MAP	10/19/18
Jason Raimondi	Engineer	JR	10/19/18

SARANAC - OU3 ISS AREA

CELL LAYOUT - 10/9/18

LAKE FLOWER

LAKE FLOWER

PP NM22-S

N
W E
S

RIPRAP APRON

CONCRETE HEADWALL

LIMITS OF OU3 DREDGE / BACKFILL

FIRST ROW CELLS ALONG 5' OFFSET - 5' WIDE

ISS AREA - 5' OFFSET

LIMITS OF SOIL CHOKED STONE

ISS CELLS TYP (<

ISS AREA

UST

CEDAR ROW

CEDAR

SHED

NM-2

(3) CEDARS

1529.00

1530.00

1531.00

1532.00

C-1 50.3 SF PC: 9.3 CY ISS: 18.6 CY
C-2 72.9 SF PC: 13.5 CY ISS: 27.0 CY
C-3 70.1 SF PC: 13.0 CY ISS: 26.0 CY
C-4 51.1 SF PC: 9.5 CY ISS: 18.9 CY
C-5 62.3 SF PC: 11.5 CY ISS: 23.1 CY
C-6 58.0 SF PC: 10.7 CY ISS: 21.5 CY
C-7 65.4 SF PC: 12.1 CY ISS: 24.2 CY
C-8 64.5 SF PC: 11.9 CY ISS: 23.9 CY
C-9 29.1 SF PC: 5.4 CY ISS: 10.8 CY
C-10 32.6 SF PC: 6.0 CY ISS: 12.1 CY
C-11 66.3 SF PC: 12.3 CY ISS: 24.6 CY
C-12 29.3 SF PC: 5.4 CY ISS: 10.9 CY
C-13 98.3 SF PC: 18.2 CY ISS: 36.4 CY
C-14 122.1 SF PC: 22.6 CY ISS: 45.2 CY
C-15 129.5 SF PC: 24.0 CY ISS: 48.0 CY
C-16 130.6 SF PC: 24.2 CY ISS: 48.4 CY
C-17 121.9 SF PC: 22.6 CY ISS: 45.1 CY
C-18 120.6 SF PC: 22.3 CY ISS: 44.7 CY
C-19 107.4 SF PC: 19.9 CY ISS: 39.8 CY
C-20 41.0 SF PC: 7.6 CY ISS: 15.2 CY
C-21 27.0 SF PC: 5.0 CY ISS: 10.0 CY
C-22 34.2 SF PC: 6.3 CY ISS: 12.7 CY
C-23 95.3 SF PC: 17.6 CY ISS: 35.3 CY
C-24 119.9 SF PC: 22.2 CY ISS: 44.4 CY
C-25 156.0 SF PC: 28.9 CY ISS: 57.8 CY
C-26 174.8 SF PC: 32.4 CY ISS: 64.7 CY
C-27 143.4 SF PC: 26.6 CY ISS: 53.1 CY
C-28 169.0 SF PC: 31.3 CY ISS: 62.6 CY
C-29 188.5 SF PC: 34.9 CY ISS: 69.8 CY
C-30 44.8 SF PC: 8.3 CY ISS: 16.6 CY
C-31 28.1 SF PC: 5.2 CY ISS: 10.4 CY
C-32 41.8 SF PC: 7.7 CY ISS: 15.5 CY
C-33 105.4 SF PC: 19.5 CY ISS: 39.0 CY
C-34 119.6 SF PC: 22.1 CY ISS: 44.3 CY
C-35 51.3 SF PC: 9.5 CY ISS: 19.0 CY

0 10 20 Feet

LAST REVISED: 10/9/2018

OU3 ISS TREATMENT

NYSDEC - SARANAC LAKE GAS CO.

CONTRACT D010663
SITE 516008
SARANAC LAKE, NY

UNIT WEIGHT	122

DRY RE-AGENT MIX	
PC	8%
GGBFS	0%
WATER	1

TABLE 1 - NYSDEC - SARANAC LAKE GAS CO - OU3 - UPLAND EXCAVATION & ISS TREATMENT

CELL TYPE	CELL AREA	PRE-CUT DEPTH	PRE-CUT VOLUME	AVG ISS DEPTH BELOW PRE-CUT	ISS TREATMENT VOLUME	UNIT WEIGHT	ISS TREATMENT WEIGHT	DRY RE-AGENT MIX (8% PC)	DRY RE-AGENT MIX (0% GGBFS)	TOTAL DRY RE-AGENT MIX (8%)	WATER RATIO 1:1	TOTAL ISS TREATMENT MIX	MIX CYCLES
	FT^2			FT	CY	LBS/FT^3	TONS	TONS	TONS	TONS	GALLONS	GALLONS	QTY
C-1				10.0	18.6	122	30.7	2.5	0.0	2.5	588.3	775.00	4.5
C-2				10.0	27.0	122	44.5	3.6	0.0	3.6	852.6	1,123.21	6.5
C-3				10.0	26.0	122	42.8	3.4	0.0	3.4	819.8	1,080.07	6.2
C-4	51.1	5.0	9.5	10.0	18.9	122	31.2	2.5	0.0	2.5	597.6	787.32	4.5
C-5	62.3	5.0	11.5	10.0	23.1	122	38.0	3.0	0.0	3.0	728.6	959.89	5.5
C-6	58.0	5.0	10.7	10.0	21.5	122	35.4	2.8	0.0	2.8	678.3	893.64	5.1
C-7	65.4	5.0	12.1	10.0	24.2	122	39.9	3.2	0.0	3.2	764.8	1,007.65	5.8
C-8	64.5	5.0	11.9	10.0	23.9	122	39.3	3.1	0.0	3.1	754.3	993.78	5.7
C-9	29.1	5.0	5.4	10.0	10.8	122	17.8	1.4	0.0	1.4	340.3	448.36	2.6
C-10	32.6	5.0	6.0	10.0	12.1	122	19.9	1.6	0.0	1.6	381.3	502.29	2.9
C-11	66.3	5.0	12.3	10.0	24.6	122	40.4	3.2	0.0	3.2	775.4	1,021.52	5.9
C-12	29.3	5.0	5.4	10.0	10.9	122	17.9	1.4	0.0	1.4	342.7	451.44	2.6
C-13	98.3	5.0	18.2	10.0	36.4	122	60.0	4.8	0.0	4.8	1,149.6	1,514.56	8.7
C-14	122.1	5.0	22.6	10.0	45.2	122	74.5	6.0	0.0	6.0	1,427.9	1,881.26	10.8
C-15	129.5	5.0	24.0	10.0	48.0	122	79.0	6.3	0.0	6.3	1,514.5	1,995.27	11.5
C-16	130.6	5.0	24.2	10.0	48.4	122	79.7	6.4	0.0	6.4	1,527.4	2,012.22	11.6
C-17	121.9	5.0	22.6	10.0	45.1	122	74.4	5.9	0.0	5.9	1,425.6	1,878.18	10.8
C-18	120.6	5.0	22.3	10.0	44.7	122	73.6	5.9	0.0	5.9	1,410.4	1,858.15	10.7
C-19	107.4	5.0	19.9	10.0	39.8	122	65.5	5.2	0.0	5.2	1,256.0	1,654.77	9.5
C-20	41.0	5.0	7.6	10.0	15.2	122	25.0	2.0	0.0	2.0	479.5	631.71	3.6
C-21	27.0	5.0	5.0	10.0	10.0	122	16.5	1.3	0.0	1.3	315.8	416.00	2.4
C-22	34.2	5.0	6.3	10.0	12.7	122	20.9	1.7	0.0	1.7	400.0	526.94	3.0
C-23	95.3	5.0	17.6	10.0	35.3	122	58.1	4.7	0.0	4.7	1,114.5	1,468.34	8.4
C-24	119.9	5.0	22.2	10.0	44.4	122	73.1	5.9	0.0	5.9	1,402.2	1,847.36	10.6
C-25	156.0	5.0	28.9	10.0	57.8	122	95.2	7.6	0.0	7.6	1,824.4	2,403.57	13.8
C-26	174.8	5.0	32.4	10.0	64.7	122	106.6	8.5	0.0	8.5	2,044.3	2,693.23	15.5
C-27	143.4	5.0	26.6	10.0	53.1	122	87.5	7.0	0.0	7.0	1,677.1	2,209.44	12.7
C-28	169.0	5.0	31.3	10.0	62.6	122	103.1	8.2	0.0	8.2	1,976.4	2,603.87	15.0
C-29	188.5	5.0	34.9	10.0	69.8	122	115.0	9.2	0.0	9.2	2,204.5	2,904.32	16.7
C-30	44.8	5.0	8.3	10.0	16.6	122	27.3	2.2	0.0	2.2	523.9	690.26	4.0
C-31	28.1	5.0	5.2	10.0	10.4	122	17.1	1.4	0.0	1.4	328.6	432.95	2.5
C-32	41.8	5.0	7.7	10.0	15.5	122	25.5	2.0	0.0	2.0	488.8	644.03	3.7
C-33	105.4	5.0	19.5	10.0	39.0	122	64.3	5.1	0.0	5.1	1,232.6	1,623.95	9.3
C-34	119.6	5.0	22.1	10.0	44.3	122	73.0	5.8	0.0	5.8	1,398.7	1,842.74	10.6
C-35	51.3	5.0	9.5	10.0	19.0	122	31.3	2.5	0.0	2.5	599.9	790.41	4.5
TOTAL	**3,022.4**	**5.0**	**559.7**	**10.0**	**1119.4**	**122**	**1843.7**	**147.5**	**0.0**	**147.5**	**35,346.7**	**46,567.7**	**267.6**

**NOT USING GROUT PLANT - MIX CYCLES NOT APPLICABLE

Assumed unit weights:	d	SG	Unit Vol	
	lb/ft^3		ft^3	
Water	62.43	1	1	
Portland Cement	94	3.15	0.478	(loose)
GGBFS	75	2.9	0.414	(ground)

DON'T TOUCH LIST
C-1
C-2
C-3
C-4
C-5
C-6
C-7
C-8
C-9
C-10
C-11
C-12
C-13
C-14
C-15
C-16
C-17
C-18
C-19
C-20
C-21
C-22
C-23
C-24
C-25
C-26
C-27
C-28
C-29
C-30
C-31
C-32
C-33
C-34
C-35

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REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.:** 11
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:**10/26/2018
Excavation at Railroad Culvert		**Date Information Required:** ASAP
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No

REQUEST

Information Requested:

Land Remediation Inc (LRI) has observed a that the railroad culvert is in very poor structural condition with the base rocks at the mudline loose, large cracks apparent and spalling/ decomposition of the concrete throughout. The purpose of this RFI is to request a shallower removal depth inside the culvert to ensure no damage to the structure.

The design calls for a 2.5' removal depth of the sediments inside the culvert. With the condition of the culvert and with no supporting design documents or structural analysis assessment, LAND finds that there is a high risk of structural failure if the full depth excavation is performed. With the limited information available, to ensure there is no destabilization and subsequent structural damage to the base of the culvert, LAND proposes

- **a 6"-8" removal of the loose sediments (taking care to not remove any large stones from the edge that may undermine the loose base stones)**
- **placement of RCM**
- **covered by a layer of streambed fill.**

Relevant Design Documents: Spec Section 01 71 33 – Protection of the Work and Property	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 10/26/18

RESPONSE

RFI Received By: Mark Stelmack	**Initial:** MJS	**Date:** 10/26/18

MACTEC Response: Due to damage to the railroad box culvert (see photograph below) observed during the construction activities, sediment removal within the culvert shall not be conducted. Instead, RCM shall be placed at both ends of the culvert as directed in the field by MACTEC to isolate potential MGP seepage from sediment within the culvert bottom. RCM placement shall be completed and paid for in accordance with PCO #7.

LAND is directed to protect the culvert from additional damage. To that end, LAND shall identify an approach to prevent

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further degradation of the culvert including additional shoring or other protective measures at LAND's own cost. LAND is also responsible for coordination with NYSDOT and others in accordance with the NYSDOT work permit.

In accordance with contract Specification Section 01 71 33 – Protection of the Work and Property, LAND is required to inspect, protect, and restore the culvert in the event of damage. Part 1.03.C of the subject specification states: "CONTRACTOR shall assume full responsibility for the preservation of all public and private property or facility on or adjacent to the Site. If any direct or indirect damage is done by or on account of any act, omission, neglect or misconduct in the execution of the Work by the CONTRACTOR, it shall be restored by the CONTRACTOR, at their expense, to a condition equal to that existing before the damage was done."

Note the following requirements form Contract Drawing C-305 and provide documentation of compliance:

- Prior to conducting the work, the Contractor, Engineer, ARPS Representative, and NYSDOT representative shall inspect and document (video and pictures) the existing rail alignment condition; discuss the work approach; and identify any potential issues and/or special procedures required.
- Any work activities within the railway right-of-way (ROW) and/or operations during this project will require two week notification to the ARPS representative prior to the start of the work. In addition, an ARPS representative shall conduct inspections once a week; the costs for the ARPS inspections shall be at the Contractor's expense. The Contractor will also need to provide periodic updates on work progress and schedules to the ASR.
- The need for the Contractor to provide a NYSDOT certified inspector is limited to only work that could impact the rail bed.

Inspections will be held at Substantial and at Final Completion with NYSDOT, ARPS, and ASR. DEC may consider monitoring of the structure's integrity for a period of time concurrent with Land's warranty period to ensure its structural integrity.

MACTEC Review:

Individual	**Discipline**	**Initial**	**Date**
M. Stelmack, PE	Project Manager	MJS	10/31/18
M. Peters	Remediation Engineer	MAP	10/31/18
J. Raimondi	Project Engineer	JPR	10/31/18
T. Lewis	Resident Inspector		

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Condition of the railroad box culvert (10/29/18)

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REQUEST FOR INFORMATION

GENERAL INFORMATION		
Project Name:	Saranac Lake Gas Co. OU02, OU03	**RFI No.: 12**
Project Location:	Saranac Lake Village Saranac Lake, New York	**Date Information Requested:2/8/2019**
Planting details and tree substitution request		**Date Information Required: ASAP**
Client:	NYSDEC, Site No. 516008	**Date Information Provided:**
Contractor:	LAND Remediation, Inc.	**RFI Results in a Field Order or Change Order:**
MACTEC Project No.:	3611181219	☐ Yes, FO No. ___ ☐ Yes, CO No. ___ ☒ No

REQUEST		
Information Requested: **Land Remediation Inc (LRI) subcontractor Clover-leaf Nurseries has requested substitutions for tree species and clarification on one tree species. Details on page 2 of the RFI**		
Relevant Design Documents: Spec Section 32 93 00– Exterior Plants	**Attachments:** ☐ Yes ☒ No	
RFI Originator: Matt Warren	**Initial:** MJW	**Date:** 2/8/2019

RESPONSE		
RFI Received By: Jamie Welch	**Initial:** JDW	**Date:** 2/18/2019

MACTEC Response:

In response to the clarifications and substitutions requested on page 2:

- *Betula papyrifera* – clump form is suitable
- *Amelanchier* is an acceptable substitute for Black Cherry
- *Picea mariana* (Black Spruce) is an acceptable substitute for Red Spruce.

MACTEC Review:

Individual	Discipline	Initial	Date
Jamie Welch	Project Manager	JDW	2/18/19
Charles Lyman	Biologist	CL	2/13/19

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ADDITIONAL DETAIL

- **Clarification**
  - **Please clarify that the (25) Betula Papyrifera-Paper Birch 2" caliper will be clump form, which is the only way they are available commercially.**

- **Substitutions**
  - **The design calls for (15) Prunus Serotina- Black Cherry 2" Caliper. The largest size commercially available for Black Cherry found is only 3-4' height, in a container form. Clover-Leaf proposes to replace the (15) Black Cherry with (15) Amelanchier -serviceberry single stem 2" Caliper. Amelanchier is also on the Adirondack Park Agency list of native tree species for the Saranac region, and would provide the similar fruit characteristics for the fauna as Black cherry. If the proposed substitution is unacceptable, Black cherry in the smaller form can be provided if available.**

  - **The project also calls for (25) Picea rubens- Red Spruce. Clover-leaf are having the same issue of finding this size evergreen commercially available for the project. They propose substituting either (25) Picea Glauca- white spruce or (25) Picea mariana (black spruce) in 2" caliper, which translates to approx. a 6-7' height.**

Clover-leaf have been in contact with six native plant growers within the New York, New Jersey, Vermont and Pennsylvania regions. What was once available at the time of bidding is no longer available. These substitutions are in keeping with the intent of the design and will allow for successful completion the project within the spring timeline.