

**New York State Department of Environmental Conservation**  
**Division of Mineral Resources**  
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March 28, 2011

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One Lincoln Center  
Syracuse, NY 13202

**Re: THIRD NOTICE OF INCOMPLETE APPLICATION**  
**ECL Article 23 Underground Storage Permit**  
**Finger Lakes LPG Storage, LLC, Schuyler County**

Dear Mr. Bernstein:

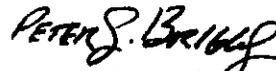
This is sent to provide you and your client with a Third Notice of Incomplete Application ("NOIA") for Finger Lakes LPG Storage, LLC's ("Finger Lakes") subject application received by the Department on October 13, 2009, Finger Lakes' May 14, 2010 submittals consisting of 1) Revised Reservoir Suitability Report and 2) Response to January 11, 2010 NOIA, and Finger Lakes' September 28, 2010 Response to August 12, 2010 Second NOIA and Finger Lakes' follow-up submittals of October 28, 2010 and November 17, 2010. The purpose of this Third NOIA is to identify remaining issues with respect to the ECL Article 23 Underground Storage Permit application for Finger Lakes' proposed liquefied petroleum gas ("LPG") facility.

This Third NOIA does not address any other Department applications, permits and/or approvals that may be required in conjunction with the subject permit. Additional comments and/or questions, if any, on other required Department approvals and/or permits will be addressed separately by the Region 8 Avon Division of Environmental Permits and/or Region 8 Avon Division of Mineral Resources. Further, this Third NOIA does not directly comment on or address Finger Lakes' Draft Supplemental Environmental Impact Statement ("DSEIS").

The enclosed comments and questions must be addressed to continue processing Finger Lakes' application for an Underground Storage Permit. Prior comments and questions from the Department and responses from Finger Lakes are not included except where an issue remains.

Please contact me if you have any comments or questions concerning this Third NOIA.

Sincerely,



Peter S. Briggs, Director  
Bureau of Oil & Gas Permitting and Management

PB/tj  
Enclosure

c: W. Moler (Finger Lakes)  
J. Maglienti, Esq.  
L. Collart  
D. Bimber  
L. Smith

**NYSDEC Division of Mineral Resources**  
**THIRD NOTICE OF INCOMPLETE APPLICATION**  
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**Financial Security/Transfer of Well Plugging Responsibilities**

1. A Request For Well Transfer with appropriate financial security held by the Department is required for any project well not currently in the applicant's name (e.g., Well 58, API 31-097-21467-00-01). Adequate financial security must also be in place for any newly proposed well(s).

**Map(s)**

*The following issues remain and must be addressed concerning Finger Lakes' Gallery Map (Exhibit A):*

1. Revised pillar width between Finger Lakes Gallery 1 and International Gallery 10: Finger Lakes states that on the original gallery map "the north direction was incorrectly pointed towards the west (upper right corner of the original map) which moved the well orientation more towards the west" and that this was the reason for the pillar width increase between proposed Finger Lakes Gallery 1 and International Gallery 10. It is understood how this affected cavern orientations and affected the pillar width. However, the distance between wells 44 and 52 also appears to have increased from the original map to the current map but no explanation for this change was provided by Finger Lakes. Please explain why the distance between the wells changed from the original map to the revised map. Is this the result of recent remapping of the brine field? If so, what resurveyed well locations were incorporated into current Exhibit A?
2. Determination of cavern outline for International Gallery 10:
  - a. The utility of re-entering Well 52 to obtain a sonar survey was not addressed as requested—please do so.
  - b. Finger Lakes states "Well 18 was drilled and a deep well pump was utilized to extract brine from this well until it was abandoned in 1942." Please provide a copy of this well record.
  - c. It is understood that no production records are available for Well 18 (1936 – 1977 {1942}), Well 52 (1972 – 1983, 1985) and Well 57 (1977 – 1983, 1985). Please explain how Messrs. Sevenker, Eyermann, Istvan, Moon and Crea concluded that the shape on the gallery map is supported by production records if not all production records are available. Please also confirm that the shape shown on the gallery map was originally determined by one of US Salt's predecessors. If "yes," please identify and provide earliest dated map showing the same gallery outline.
  - d. Finger Lakes states that the CBL for Well 52 shows good cement from 1,180' to total logging depth and that there is no cavern behind the cemented well casing to those depths, and that the Tully, Marcellus and other formations are easily identified. Please provide a copy of Well 52's CBL with the tops of the Tully, Marcellus, Onondaga, Helderberg/Manlius, Rondout, Bertie, Camillus and each Syracuse salt unit (i.e., F-4 through D-3) identified.
3. Replacement wells: The location of any new wells, other than FL1, that may be drilled as replacement wells for other wells being plugged must be shown on Exhibit A.

## **Reservoir Suitability Report**

*The following issues remain and must be addressed concerning Finger Lakes' Finite Element Analysis ("FEA," Exhibit C):*

1. The FEA's executive summary on page 1 states "Both well 58 (far away and not on FEA map, and NYSEG Galleries 1 natural gas storage service) and 2 are also too far away to have any affect on the Finger Lakes (FL) LPG storage cavern" [sic].
  - a. Does the above FEA statement hold true should the NYSEG Gallery 2 (tentatively being transferred to Arlington Storage Company, LLC) be converted to natural gas service at some future date with a 0.18 psi/ft minimum and 0.75 psi/ft maximum operating pressure measured to the ceiling of the cavern at Well 31? Please modify the FEA as appropriate to address this issue or provide the page number where this is already addressed.
  - b. Is the converse of the above FEA statement valid (i.e., Finger Lakes' LPG caverns will not affect the existing or proposed NYSEG/Arlington Galleries 1 & 2)? Please modify the FEA as appropriate to address this issue or provide the page number where this is already addressed.

*The following issues remain and must be addressed concerning Finger Lakes' cross-sections (Exhibits D, E & F):*

1. The title block of both cross-sections (Exhibits D & E) show the company name as "Arlington Storage Company, LLC." The cross-sections should be revised to show the applicant's name.
2. Proposed Well FL1 must be shown on Vertical Section B-B' (Exhibit D).
3. As previously requested, the setting depths of the brine strings must be shown on the cross-sections (Exhibits D & E). Please indicate "existing" or "planned" for each string .
4. Replacement wells: The location of any new wells that may be drilled as replacement wells for other wells being plugged must be shown on the cross-sections (Exhibits D & E).
5. There appears to be a typo in Vertical Section B-B' at Well 52 where "TOR" is noted (Exhibit D).
6. Any newly acquired sonar surveys must be incorporated and noted on the appropriate cross-sections along with providing a copy of the survey itself (e.g., Well 58).
7. The "Final Estimated Cavern Shape" of all well caverns must reflect Finger Lakes stated intention of using a LPG blanket during storage operations. In addition, the depth (MSL) of the top of the final estimated cavern must be shown (Exhibits D & E).
8. Structural cross-sections A-A' & B-B' (Exhibit E) must be expanded vertically to show all formation tops noted in Figure 2 of the FEA (i.e., Marcellus, Onondaga, Helderberg/Manlius, Rondout, Bertie, Camillus, Salt).

*The following issues remain and must be addressed concerning Finger Lakes' Cavern Development Plan and Proposed Operations:*

1. It is understood that Well 44 may now be a candidate for plugging. Given that Well 44 was originally proposed to be a monitoring well, the Department requests that consideration be given to the installation of a replacement monitoring well that would be completed at the high point (as determined by the 2009 sonar) of the northern portion ("head" for the purpose of this discussion) of proposed Finger Lakes Gallery 1. This use of this replacement well, similar to what was envisioned for Well 44, would be an indicator (monitoring) well for LPG which inadvertently moves past the "fill point" between the main body and head of Finger Lakes Gallery 1. However, use of this replacement well should be limited to monitoring. No brine or product injection should take place at this well to ensure no growth in this portion of Gallery 1. In addition to serving as an indicator well, the replacement well could also be used to recover any LPG that moves into the head of the gallery.
2. Any operational changes that result from the plugging of wells previously planned for use must be explained.
3. Exhibit G "Finger Lakes Cavern Volume and Salt Tonnage Extracted or to be Extracted" must be updated to account for any newly acquired sonar survey (e.g., Well 58).
4. Finger Lakes states it "will leave enough LPG in the cavern to prevent any solutioning of the cavern roofs. This plan is similar to what the Department approved for Cavern 6 at the Savona LPG Facility." Please provide the minimum thickness of the LPG blanket that will be maintained during storage operations, and from which point in the cavern it is measured. It is understood that any recoverable blanket will be removed for workover operations but reinstalled when storage operations are resumed.
5. Finger Lakes states "During operation of Gallery 1, Finger Lakes also proposes to utilize a digital pressure recorder on well 52 that will be linked to Finger Lakes' control room and SCADA system to ensure that pressures in both Gallery 1 and 10 are monitored to ensure that in the unlikely event there is some potential communication" ... "actions can be implemented to ensure product is not allowed to enter Gallery 10 which may not be tight." What days and hours will the control room be manned? What specific actions would be taken if communication between the galleries is indicated?

**Well Status and Condition Report**

*The following issues remain and must be addressed concerning Finger Lakes' Well Status and Condition Report:*

1. Given certain well applications were received, issues related to the adequacy of wells for the project are being reviewed by the Department's Region 8 Mineral Resources office in Avon. Discussions are ongoing concerning the drilling, conversion and plugging of various project wells. However, Finger Lakes' response to this Third NOIA must identify which wells will be plugged within the proposed storage galleries, and the proposed use of all remaining and new well(s).
2. Finger Lakes' response did not include all of the well logs described. Please provide one copy of the following logs: Microvertilog (Wells 33, 44, 52, 58) and CBL (Wells 34, one copy of 52 as requested in above Item 2d on Page 1).
3. A copy of any newly acquired well evaluation logs must be provided to the Department (e.g., Well 58).