

**STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

In the Matter

- of -

the Application for an Underground Storage of Gas Permit
Pursuant to Environmental Conservation Law Article 23, Title 13,

- by -

FINGER LAKES LPG STORAGE, LLC,

Applicant.

DEC Permit Application ID No. 8-4432-00085

OHMS Case No. 201166576

**RULING OF THE CHIEF ADMINISTRATIVE LAW JUDGE ON
ISSUES AND PARTY STATUS**

September 8, 2017

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**RULING OF THE CHIEF ADMINISTRATIVE LAW JUDGE ON
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I. PROCEEDINGS

A. Project Description and Location

Applicant Finger Lakes LPG Storage, LLC (applicant or Finger Lakes LPG), a subsidiary of Crestwood Midstream Partners, L.P. (Crestwood), proposes to construct and operate a new underground liquefied petroleum gas (LPG) storage facility for the storage and distribution of propane on a portion of a 576-acre site located on NYS Routes 14 and 14A west of Seneca Lake in the Town of Reading, Schuyler County, and approximately 2.5 miles north of the Village of Watkins Glen. The storage facility would use existing solution-mined underground caverns in the Syracuse salt formation created by U.S. Salt, LLC (an affiliate of Finger Lakes LPG) and its predecessors' salt production operations. The existing caverns are located near the western shore of Lake Seneca. Associated surface facilities would extend uphill to the west with compressors east of NYS Route 14 south of the intersection with NYS Route 14A. A brine pond and flare stack would be located south of NYS Route 14A west of the intersection with NYS Route 14.

As originally proposed, a maximum of 2.10 million barrels (88.20 million gallons) of LPG in the form of liquid propane and butane was to be stored in the caverns seasonally, displacing some of the brine currently filling them. The stored LPG would be withdrawn by displacement of propane by brine when demand occurs during the heating season, and displacement of butane by brine during the gasoline blending season. During storage operations, the brine displaced by LPG was originally proposed to be stored and contained in two (2) double-lined brine ponds: the East Brine Pond and the West Brine Pond. The 2.25-acre East Brine Pond was to be located on the east side of NYS Route 14 approximately 2,000 feet south of the intersection of NYS Routes 14 and 14A, and would have had a capacity of approximately 0.17 million barrels (7.14 million gallons).¹ The 6.35-acre West Brine Pond would be located approximately 1,500 feet west of the intersection of NYS Routes 14 and 14A, and would have a capacity of approximately 0.80 million barrels (33.6 million gallons) (see Engineer's Report for Finger Lakes LPG Storage, LLC East and West Brine Ponds [Sept. 10, 2012], Vol. 1, § 3.1, at 10, NYSDEC OHMS Document No. 201166576-00003, Doc. List I.B.25).² (See Revised Site Operations Plan, OHMS Doc. No. 00003, Doc. List I.B.7, Exh 3.)

¹ As discussed further below, applicant has eliminated the East Brine Pond from the project and reduced the total maximum storage capacity of the facility to 1.5 million barrels (63 million gallons). In addition, only propane is proposed to be stored at the facility.

² Each document is marked as "NYSDEC OHMS Document No. 201166576" followed by a hyphen and a five digit suffix (see Exhibit List, attached). Here after, documents will be referenced as "OHMS Doc. No." followed by the five digit suffix. If the document also appears

The facility is proposed to connect to the existing TE Products Pipeline Company, LLC (TEPPCO) LPG interstate pipeline for shipment of LPG into and out of the facility. As originally proposed, LPG was also to be shipped by truck via Routes 14 and 14A, and by rail via the existing Norfolk & Southern Railroad.³ Also as originally proposed, the project involved construction of a new rail and truck LPG transfer facility, consisting of a six-rail siding capable of allowing loading and unloading of 24 rail cars within 12 hours, and a truck loading station capable of loading four trucks per hour. The rail and truck loading facility would have been capable of operating on a 24-hour basis, 365-days a year. Construction would have also included surface work consisting of truck and rail loading terminals, LPG storage tanks, offices and other distribution facilities, and storm water control structures.

B. Permits Requested

On October 9, 2009, applicant applied to the New York State Department of Environmental Conservation (Department or DEC) for an Underground Storage of Gas Permit pursuant to Environmental Conservation Law (ECL) article 23, title 13. Applicant also obtained coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (SPDES General Permit GP-0-08-001), and submitted updates to its Stormwater Pollution Prevention Plan through September 2012. On May 10, 2010, applicant submitted an application for an Air Facility Registration (6 NYCRR 201-4) for a proposed propane dryer at the facility.

C. SEQRA Status

Department staff determined that the project is a Type I action pursuant to ECL article 8 (State Environmental Quality Review Act) (SEQRA). The Department is the lead agency for the SEQRA review of the action (see Commissioner's Determination of Lead Agency [Feb. 2, 2010], OHMS Doc. No. 00006, Doc. List IV.C.12), and issued a positive declaration of environmental significance on November 17, 2010 (see Letter, id., Doc. List IV.D.11). SEQRA review of the project was the subject of scoping (see 6 NYCRR 617.8), and a final scoping outline for the draft supplemental environmental impact statement (DSEIS) was issued by the Department on February 15, 2011 (see OHMS Doc. No. 00006, Doc. List IV.D.20).

on the document list last updated September 8, 2017 (see attached), the document is also identified with "Doc. List" and the document list number.

³ As discussed further below, applicant is also eliminating truck and rail deliveries to and from the project. Accordingly, the rail and truck loading facilities are also being eliminated from the project.

A DSEIS was initially submitted by applicant on March 15, 2011, and revisions were received on June 9, July 18, and August 1, 2011. The DSEIS is a project-specific draft supplemental EIS to the Department's 1992 Final Generic Environmental Impact Statement for the Oil, Gas, and Solution Mining Regulatory Program (1992 GEIS). On August 17, 2011, Department staff accepted the DSEIS as adequate for public review and comment pursuant to 6 NYCRR 617.9(a) (see OHMS Doc. No. 00006, Doc. List IV.B.3).

D. Proceedings on the Application

The permit applied for is not subject to the Uniform Procedures Act (ECL article 70 and 6 NYCRR part 621). However, on August 17, 2011, Department staff determined that the application was complete. A Combined Notice of Complete Application, Notice of Acceptance of Draft SEIS and Notice of Public Hearing was issued August 17, 2011 (OHMS Doc. No. 00006, Doc. List IV.B.3), and published in the Department's electronic Environmental Notice Bulletin (ENB) on August 24, 2011 (http://www.dec.ny.gov/enb/20110824_not8.html). On October 24, 2011, a Combined Notice of Complete Application, Notice of Acceptance of Draft Supplemental Environmental Impact Statement and Notice of Continuation of a Public Hearing dated October 5, 2011 (OHMS Doc. No. 00006, Doc. List IV.B.6), was published in the ENB (<http://www.dec.ny.gov/permits/71619.html>).

Two legislative hearings on the application and DSEIS were held before an Administrative Law Judge (ALJ) on September 27 and November 3, 2011, respectively, for the receipt of comments from the public. The period for public comments closed on November 14, 2011.

E. Referral for Further Part 624 Proceedings

By letter dated August 6, 2014, Department staff informed applicant that it was necessary to hold an adjudicatory public hearing on the project pursuant to 6 NYCRR 624.1(a)(6) (see Letter, Dennis P. Harkawik, Regional Attorney, New York State Department of Environmental Conservation [DEC] to Kevin Bernstein, Esq., Bond, Schoeneck & King, LLP [BSK], OHMS Doc. No. 00002). On the same date, Department staff referred the matter to the Department's Office of Hearings and Mediation Services (see Permit Hearing Referral [Aug. 8, 2014], OHMS Doc. No. 00001). By letter dated September 29, 2014, the parties were informed that Chief Administrative Law Judge James T. McClymonds was assigned to preside over the hearing (see Letter, Chief ALJ to DEC and BSK, OHMS Doc. No. 00007).

A notice of deadline for petitions for party status and issues conference was issued on October 22, 2014 (OHMS Doc. No. 00008). On October 29, 2014, the notice was published in the ENB (Doc. No. 00010) and in the Village of Watkins Glen Review & Express (OHMS Doc. No. 00011).

Pursuant to 6 NYCRR 624.4(b), the notice scheduled a pre-adjudicatory hearing issues conference for February 12 and 13, 2015, at the Holiday Inn Express, 2666 Corning Road, Horseheads, New York. The notice further provided that an adjudicatory hearing would be scheduled at a later date if issues are identified for adjudication.

The notice originally established Wednesday, December 10, 2014, as the deadline for the filing of petitions for party status. On November 18, 2014, a notice of extension of deadline for filing petitions for party status was issued extending the deadline to Friday, January 16, 2015 (OHMS Doc. No. 00013). The notice of extension was published in the ENB on November 19, 2015 (OHMS Doc. No. 00015), and in the Village of Watkins Glen Review & Express on November 26, 2014 (OHMS Doc. No. 00016).

The notices also authorized applicant and Department staff to file written responses to any petitions. Any responses were due to be filed and served by 5:00 PM on Monday, February 9, 2015 (OHMS Doc. No. 00013).

F. Draft Permit Conditions

The October 22, 2014 notice provided that on Monday, November 10, 2014, Department staff would issue either a draft Article 23, Title 13 Underground Storage of Gas Permit with conditions or a draft denial for consideration in the issues conference and would post a copy of the draft permit or denial on its website on that date (OHMS Doc. No. 00008).

On November 10, 2014, Department staff issued draft Underground Gas Storage Permit conditions (OHMS Doc. No. 00012, Doc. List V.1). In its cover letter accompanying the draft conditions, Department staff asserted that the conditions contain requirements and obligations staff believes are appropriate and necessary to be imposed in the event a permit is issued after the hearing process is completed (see id., Doc. List V.2).

G. Party Status Petitions and Responses

The following nine party status petitions were timely filed with the Department's Office of Hearings and Mediation Services.

Full Party Status:

- Gas Free Seneca (GFS)
 - Confidential Version (1/16/15) (OHMS Doc. No. 00020)
 - Public Version (1/22/15) (OHMS Doc. No. 00026)

- Seneca Lake Pure Waters Association (SLPWA): Confidential Version (1/16/15) with corrected set of eight figures submitted January 29, 2015 incorporated (OHMS Doc. No. 00021)⁴
- Seneca Lake Communities (SL Communities)⁵ (1/16/15) (OHMS Doc. No. 00022)

Amicus Party Status:

- Finger Lakes Wine Business Coalition (FLXWBC) (1/16/15) (OHMS Doc. No. 00023)
- Schuyler County Legislators Van A. Harp and Michael L. Lausell (1/16/15) (OHMS Doc. No. 00024)
- National Propane Gas Association (NPGA) (1/14/15) (OHMS Doc. No. 00018)
- New York L.P. Gas Association, Inc. (NYPGA) (1/13/15) (OHMS Doc. No. 00017)
- Propane Gas Association of New England (PGANE) (1/14/15) (OHMS Doc. No. 00019)
- United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, AFL-CIO, CLC (USW) (1/16/15) (OHMS Doc. No. 00025)⁶

⁴ On February 9, 2015, SLPWA sought leave to file a January 26, 2015 addendum to the January 16, 2015 report of Dr. Alberto Nieto filed with its petition. Applicant objected to the filing as untimely served. By memorandum ruling dated February 11, 2015, I denied SLPWA's request for leave to file the addendum.

⁵ Seneca Lake Communities includes Seneca County, Yates County, Town of Fayette, Town of Geneva, Town of Ithaca, Town of Romulus, Town of Starkey, Town of Ulysses, Town of Waterloo, City of Geneva, Village of Watkins Glen, and Village of Waterloo.

⁶ To allow potential parties access to documents claimed to be confidential by applicant without the need for a ruling on confidentiality from the ALJ, a confidentiality agreement and order was issued for use by the parties. The following parties have confidentiality agreements with applicant on file with OHMS:

- Gas Free Seneca (Deborah Goldberg, Earthjustice) (11/2/14)
 - Dr. Howard C. Clark (11/10/14)
- Seneca Lake Pure Waters Association (11/13/14)
 - Alberto S. Nieto (11/30/14)
 - Raymond C. Vaughan (12/15/14)

As authorized in the notices, applicant and Department staff each filed timely responses to the petitions (see Letter, DEC to Chief ALJ, Responses to Petitions for Party Status [Feb. 9, 2015], OHMS Doc. No. 00029; Finger Lakes LPG Storage, LLC, Response to Party Status Petitions [Feb. 9, 2015], OHMS Doc. No. 00030).

H. Issues Conference

As provided in the notices, the issues conference was convened in Horseheads, New York, on February 12, 2015, and continued on February 13, 2015. The issues conference was conducted in three sessions: a public open session on the morning of February 12, a closed confidential session on the afternoon of February 12, and a public open session on February 13. Participation in the February 12 closed confidential afternoon session was limited to Department staff, applicant's representatives, representatives of parties subject to a confidentiality agreement and order, and the presiding ALJ. All three sessions were stenographically recorded (see Transcripts, OHMS Doc. Nos. 00046, 00047 [confidential session], and 00048).

I. Post Issues Conference Briefing

At the close of the issues conference, I authorized the filing of post issues conference briefs and replies. Post issues conference briefs were due to be filed by April 17, 2015, and replies by May 29, 2015.

Post issues conference briefs dated April 17, 2015, were filed by:

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- Mary Anne Kowalski (11/11/14)
 - Richard Weakland (8/29/16)
 - Finger Lakes Wine Business Coalition (John L. Barone) (12/23/14)
 - City and Town of Geneva and Village of Watkins Glen (Jon Krois, NRDC) (1/9/15)
 - Dr. John Halfman (Seneca Lake Communities) (2/11/15)
 - NYPGA and PGANE (A.B. Howard and Matthew Griesemer) (2/9/15)
 - NPGA (Jeffrey Petrash) (2/9/15)
 - Schuyler County Legislators Harp and Lausell (2/12/15)

The confidentiality agreement and order provides for the filing of both confidential and public versions of documents in this proceeding.

Notwithstanding the issuance of the confidentiality agreement and order, applications and a motion pursuant to the order have been filed in this proceeding challenging applicant's confidentiality claims. Those challenges are addressed in a separate ruling.

- Department staff (OHMS Doc. No. 00037);
- Finger Lakes LPG (OHMS Doc. No. 00038);
- GFS (OHMS Doc. Nos. 00039 [confidential version] and 00040 [public version]);
- SLPWA (OHMS Doc. No. 00041 [confidential version]);
- SL Communities (OHMS Doc. No. 00042);
- NPGA (OHMS Doc. No. 00044); and
- USW (OHMS Doc. No. 00045).

In addition, the Schuyler County Legislators filed a post issues conference brief and petition for full-party status dated April 17, 2015 (OHMS Doc. No. 00043).

Post issues conference reply briefs dated May 29, 2015, were filed by:

- Department staff (OHMS Doc. Nos. 00051 [with public versions of Briggs and Rodriguez affidavits] and 00058 [confidential versions of Briggs and Rodriguez affidavits]);
- Finger Lakes LPG (OHMS Doc. No. 00052);
- GFS (OHMS Doc. Nos. 00053 [confidential version] and 00054 [public version]);
- SLPWA (OHMS Doc. No. 00055 [confidential version]);
- SL Communities (OHMS Doc. No. 00056); and
- FLXWBC (OHMS Doc. No. 00057).

On August 26, 2015, as a result of objections raised by several petitioners, I authorized petitioners to serve and file a final round of sur-reply briefs. Sur-reply briefs were due to be filed by September 21, 2015. Sur-reply briefs dated September 21, 2015 were filed by:

- GFS (OHMS Doc. Nos. 00059 [confidential version] and 00060 [public version]);
- SLPWA (OHMS Doc. No. 00061 [confidential version]); and
- Schuyler County Legislators (OHMS Doc. No. 00062).

J. SLPWA Post Issues Conference Supplemental Petition

The written approval of the State Geologist is required for an underground storage of gas permit (see ECL 23-1301[1]). During the permit application review process, the Department received a determination from Acting Associate State Geologist Dr. Andrew Kozlowski approving the project (see Letter, New York State Geological Survey to DEC [3-15-13], OHMS Doc. No. 00003, Doc. List I.A.25). A question regarding the authority of Dr. Kozlowski to approve the project was raised in post issues conference briefing correspondence.

In a memorandum to the parties dated June 23, 2016, I indicated that if any party wished to have the question of Dr. Kozlowski's authority considered in this proceeding, the

appropriate procedure was to file a late-filed petition pursuant to 6 NYCRR 624.5(c). On July 26, 2016, SLPWA filed a supplement to its party status petition seeking to raise issues concerning Dr. Kozlowski's authority (OHMS Doc. No. 00063). Responses to SLPWA's supplemental petition were filed by applicant on August 15, 2016 (OHMS Doc. No. 00064), and by Department staff on September 9, 2016 (OHMS Doc. No. 00065). SLPWA's request to file a reply was granted and SLPWA filed its reply on September 21, 2016 (OHMS Doc. No. 00066).

K. Project Modification and Updated Draft Permit

On August 8, 2016, applicant filed and served a letter detailing several project modifications it stated it was committed to implementing (see OHMS Doc. No. 00067). The stated purposes of the modifications was to reduce the scale and environmental impacts of the project and to respond to the concerns expressed by those participating in the issues conference and by stakeholders outside the Department's permit hearing proceeding. The modifications include (1) the elimination of the proposal to store liquid butane at the facility and the reduction of propane storage capacity from 2.1 million barrels to 1.5 million barrels; (2) elimination of the project's rail and truck loading facilities, thereby eliminating the delivery of LPG by rail or truck to or from the project; as a result, all deliveries of LPG would be by pipeline; (3) elimination of the proposed East Brine Pond on the east side (or lakeside) of Route 14 and the relocation of the flare stack to the West Brine Pond; and (4) a proposal to provide resources ranging from financial resources to technical resources (mining data) to support community initiatives for the preservation and improvement of water quality in the area, including Seneca Lake. Attached to applicant's August 8, 2016 letter is a revised site operation plan and a visual impacts analysis depicting the view of the West Brine Pond with a flare stack from the east side of the lake.

In its August 8, 2016 letter, applicant indicated that the project changes would be the subject of resolutions of governmental bodies, especially one from the Schuyler County Legislature. On August 12, 2016, my office received a letter from the Schuyler County Legislature attaching a resolution adopted August 8, 2016 renewing support for Finger Lakes LPG's project as modified (see Schuyler County Resolution No. 251-16, OHMS Doc. No. 00068).

I authorized the filing of responses to applicant's August 8, 2016 letter. Department staff filed a response dated August 22, 2016 (OHMS Doc. No. 00069). Attached to Department staff's response is a revised draft permit updated August 16, 2016 (Updated Draft Permit) and updated process flow diagrams with updated notes.

Responses were also filed by GFS (OHMS Doc. No. 00070), SLPWA (OHMS Doc. No. 00071), SL Communities (OHMS Doc. No. 00072), Schuyler County Legislators (OHMS Doc. No. 00073), and FLXWBC (OHMS Doc. No. 00074), all dated August 22, 2016.

I granted the request of GFS, joined in by SL Communities, for leave to file a response to Department staff's August 22, 2016 response, and accepted the response as filed (OHMS Doc. 00075 [dated Aug. 24, 2016]). I also granted applicant's request to file a response to Department staff's and the responding petitioners' August 22, 2016 filings. Applicant's response was filed September 12, 2016 (OHMS Doc. No. 00077). Among other exhibits, attached to applicant's response is a further revised site operations plan, moving the flare stack out of a wooded area, and a further revised visual analysis of the flare stack (see id., Exhs 1 and 2).

Although the responding petitioners were authorized to file further responses on September 12, 2016, no further responses were received.

II. STANDARDS OF REVIEW

The purpose of a Departmental issues conference is:

- (1) to hear argument on whether party status should be granted to any petitioner;
- (2) to narrow or resolve disputed issues of fact without resort to taking testimony;
- (3) to hear argument on whether disputed issues of fact that are not resolved meet the standards for adjudicable issues set forth in 6 NYCRR 624.4(c);
- (4) to determine whether legal issues exist whose resolution is not dependent on facts that are in substantial dispute and, if so, to hear argument on the merits of those issues; and
- (5) to decide any pending motions

(see 6 NYCRR 624.4[b][2]). After the conclusion of the issues conference, and after the filing of any authorized briefing, the ALJ issues an issues ruling that (1) determines which persons will be granted party status; (2) determines which issues satisfy the requirements of adjudicable issues as set forth in section 624.4(c) and define those issues as precisely as possible; (3) rules on the merits of any legal issue where a ruling does not depend on the resolution of disputed issues of fact; and (4) decides any pending motions to the extent practicable (see 6 NYCRR 624.5[b][5]).

To be granted full party status, a full party status petitioner must, among other things, identify an issue for adjudication that meets the criteria of section 624.4(c), and present an offer of proof specifying the party's witnesses, the nature of the evidence the person expects to present, and the grounds upon which the assertion is made with respect to that issue (see 6 NYCRR 624.5[b][2]). The ALJ will grant the petitioner full party status based upon (1) a finding that the petitioner has filed an acceptable petition pursuant to 6 NYCRR 624.5(b)(1) and (2); (2) a finding that the petitioner has raised a substantive and significant issue or that the

petitioner can make a meaningful contribution to the record regarding a substantive and significant issue raised by another party; and (3) a demonstration of adequate environmental interest (see 6 NYCRR 624.5[d][1]).

To be granted amicus party status, an amicus petitioner must, among other things, identify the nature of the legal or policy issue to be briefed that meets the criteria of section 624.4(c), and provide a statement explaining why the proposed party is in a special position with respect to that issue (see 6 NYCRR 624.5[b][3]). The ALJ will grant the petitioner amicus status based upon a finding that (1) the petitioner has filed an acceptable petition; (2) the petitioner has identified a legal or policy issue which needs to be resolved by the hearing; and (3) the petitioner has a sufficient interest in the resolution of such issue and through expertise, special knowledge or unique perspective may contribute materially to the record on such issue (see 6 NYCRR 624.5[d][2]).

Thus, to be granted party status, petitioners must raise a factual, legal, or policy issue that meets the standards for adjudicable issues under section 624.4(c). Pursuant to section 624.4(c), an issue is adjudicable if:

(1) it relates to a dispute between Department staff and applicant over a substantial term or condition of the draft permit;

(2) it relates to a matter cited by Department staff as a basis to deny the permit and is contested by the applicant; or

(3) it is proposed by a potential party and is both substantive and significant

(see 6 NYCRR 624.4[c][1]). Because none of the issues raised at the issues conference concern a dispute between Department staff and applicant over a substantial term or condition of the draft permit, and Department staff has not proposed to deny the application, neither of the first two criteria are involved in this matter. Thus, the issues raised in the petitions and briefs, and argued at the issues conference, must be “both substantive and significant” to be adjudicated.

An issue is “substantive” if it raises “sufficient doubt about the applicant’s ability to meet statutory or regulatory criteria applicable to the project, such that a reasonable person would require further inquiry” (6 NYCRR 624.4[c][2]). To determine whether sufficient doubt has been raised, “the ALJ must consider the proposed issue in light of the application and related documents, the draft permit, the content of any petitions filed for party status, the record of the issues conference and any subsequent written arguments authorized by the ALJ” (id.).

An issue is “significant” if it “has the potential to result in the denial of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit” (6 NYCRR 624.4[c][3]).

Where, as here, Department staff has reviewed an application and determined that an applicant's project, as proposed or as conditioned by the draft permit, conforms to all applicable statutory and regulatory requirements, the burden of persuasion at the issues conference is on the potential party proposing any issue related to the project to demonstrate that the issue is both substantive and significant (see 6 NYCRR 624.4[c][4]).

With respect to SEQRA issues, where, as here, the Department is the lead agency and has required the preparation of a draft EIS, the determination to adjudicate issues regarding the sufficiency of the DEIS or the ability of the Department to make SEQRA findings pursuant to 6 NYCRR 617.9 are also governed by the standards set forth in section 624.4(c)(1) (see 6 NYCRR 624.4[c][6][i][b]). Thus, in the context of this proceeding, petitioners have the burden of persuasion to demonstrate that the SEQRA issues they propose are both substantive and significant.

If the ALJ concludes that substantive and significant issues require adjudication, the ALJ will convene an evidentiary hearing to take evidence relevant to the issues identified in the issues ruling (see 6 NYCRR 624.8[a][4]). If the ALJ concludes, on the other hand, that no substantive and significant issues are presented requiring adjudication, the ALJ will cancel any further proceedings, and remand the matter to Department staff to continue processing the application and issue the requested permit (see 6 NYCRR 624.4[c][5]). The further processing in this matter would include preparing a responsiveness summary responding to comments on the DSEIS, finalizing the EIS, and making the findings required by SEQRA.

Recent Commissioner interim decisions have elaborated on the analysis to be applied when evaluating a petitioner's offer of proof in support of its petition for party status:

"The submission of a petition for party status is not a pro forma exercise. Conducting an adjudicatory hearing 'where "offers of proof, at best, raise potential uncertainties" or where such a hearing "would dissolve into an academic debate" is not the intent of the Department's hearing process' (Matter of Adirondack Fish Culture Station, Interim Decision of the Commissioner, August 19, 1999, at 8 [quoting Matter of AKZO Nobel Salt Inc., Interim Decision of the Commissioner, January 31, 1996, at 12]).

"In order that the issues conference serve a worthwhile function, it is not meant to merely catalogue areas of dispute, but rather makes qualitative judgments as to the strength of the offers of proof and related arguments. With respect to the offer of proof, any assertions that a potential party makes must have a factual or scientific foundation. Speculation, expressions of concern, general criticisms, or conclusory statements are insufficient to raise an adjudicable issue. The qualifications of the expert witnesses that a petitioner identifies may also be subject to consideration at this stage. Even where an offer of proof is supported by a factual or scientific foundation, it may be rebutted by the application, the draft permit and proposed conditions, the analysis of Department staff, or the record of the issues conference, among other relevant materials and submissions. In

areas of Department staff expertise, its evaluation of the application and supporting documentation is important in determining the adjudicability of an issue (see, e.g., Matter of NYC Department of Sanitation (Southwest Brooklyn Marine Transfer Station), Decision of the Commissioner, May 21, 2012,) at 6; Matter of Crossroads Ventures, LLC, Interim Decision of the Deputy Commissioner, December 29, 2006, at 6; Matter of Mirant Bowline, LLC, Interim Decision of the Commissioner, June 20, 2001, at 3; Matter of Bonded Concrete, Inc., Interim Decision of the Commissioner, June 4, 1990, at 2)”

(Matter of Seneca Meadows, Inc., Interim Decision of the Commissioner, Oct. 26, 2012, at 4).

Applicant argues that disputed issues of fact may be resolved at the issues conference stage of the proceeding (citing 6 NYCRR 624.4[b][2][ii] [one purpose of the issues conference is “to narrow or resolve disputed issues of fact”]). Applicant is correct, but only to a point. A Departmental issues conference is akin to summary judgment, with some key distinctions not relevant here (see Matter of Terry Hill South Field, First Interim Decision of the Commissioner, Dec. 21, 2004, at 9-10). Similar to summary judgment, the focus is on issue finding, not issue resolution. As provided in the regulations, the issues conference may be used to resolve disputed issues of fact, but “without resort to taking testimony” (6 NYCRR 624.4[b][2][ii] [emphasis added]). The issues conference is not an evidentiary hearing during which conflicting evidence may be weighed.

Thus, at the issues conference stage, properly supported factual assertions proposed by a petitioner may be rebutted by the issues conference record only as a matter of law. For example, where a petitioner contends that a certain analysis was not undertaken by the Department, such a contention may be rebutted by demonstrating where in the record the analysis can be found, or providing a description of the analysis conducted by Department staff during the permit review process if that analysis is not otherwise documented. Or, where a petitioner’s offer of proof is premised upon a misunderstanding of the application and supporting materials, that offer of proof may be rebutted by showing where in the record the correct information may be found and explaining how petitioner misinterprets that information.

On the other hand, if the applicant seeks to rebut a properly supported offer of proof with new evidence or expert opinion not previously submitted during the permit review process, factual issues raised by such rebuttal evidence should be resolved through adjudication, not at the issue conference stage and without the benefit of cross examination (see Matter of Saratoga County Landfill, Second Interim Decision of the Commissioner, Oct. 3, 1995, at 2).

III. PROPOSED ISSUES - ANALYSIS AND RULINGS

Full party status petitioners seek to raise several issues both with respect to the proposed ECL article 23, title 13 Underground Storage of Gas permit, and the SEQRA review of the project. Because the standards governing review of issues under ECL article 23, title 13, and under SEQRA differ, they are analyzed in turn.

A. ECL Article 23, Title 13 Issues

1. Gas Storage Permit Standards

ECL 23-1301 provides that no underground reservoir shall be devoted to the storage of natural gas or liquefied petroleum gas unless the prospective operator of the reservoir, after obtaining approval from the State geologist, obtains an underground storage permit from the Department (see ECL 23-1301[1]). The application for an underground storage permit must include:

- a. a map showing the location and boundaries of the proposed underground storage reservoir;
- b. a report containing sufficient data to show that the reservoir is adaptable for storage purposes;
- c. an affidavit signed by the prospective operator showing that the operator has sufficient control over the mineral rights affected by the storage reservoir and buffer zone; and
- d. such other information as the Department may require.

(see ECL 23-1301[1]).

As part of the application process, Department staff has developed a detailed list of items to be included in the report required by ECL 23-1301(1)(b) (see Letter, DEC to Inergy Midstream LLC [2-24-09], OHMS Doc. No. 00003, Doc. List I.A.1). The application must include a reservoir suitability report (RSR) that contains all testing and analysis specific to the design and operation of the storage reservoir sufficient “to demonstrate that the stored product can be handled and confined without impact to public health and safety and the environment” (id. at unnumb p 6). The RSR must also describe proposed safety and emergency shut-down systems planned for the facility (see id. at unnumb p 4).

Other information required by Department staff includes a subsidence monitoring plan, a mechanical integrity testing (MIT) plan, and a well status and condition report for each

well drilled in the proposed storage area, including those in the reservoir and buffer zone (see id.).

With respect to the underground storage reservoir map required by ECL 23-1301(1)(a), Department staff requires that the map show the reservoir and buffer zone limits, including existing and proposed ultimate cavern outlines, the location of all storage wells, and the location of all plugged and abandoned wells (see id. at unnumb p 2). The map must also depict in cross-section all faults and other structural and stratigraphic features identified in the RSR that affect either continuity and extent of the formations shown, or effectiveness of containment of gas in the storage reservoir (see id. at unnumb p 3).

2. Gas Storage Permit Application

On October 9, 2009, applicant submitted its application for an underground LPG storage permit to the Department (see Letter, BSK to DEC [10-9-09], OHMS Doc. No. 00003, Doc. List I.A.2). In support of its application, applicant submitted an RSR and a well status and condition report, among other required documents. Department staff subsequently issued three notices of incomplete application (NOIA) on January 11, 2010, August 12, 2010, and March 28, 2011, respectively (see id., Doc. List I.A.4, 7 and 11). Applicant supplemented its storage permit application by providing responses to each of the NOIAs on May 17, 2010, September 29, 2010 (revised November 18, 2010), and April 20, 2011, respectively (see id., Doc. List I.A.5, 8, 10 and 12).⁷

In its RSR revised May 14, 2010, applicant proposed to construct an LPG storage system with a pipeline connection, and rail and truck loading and unloading racks⁸ (see Reservoir Suitability Report [5-14-10], id., Doc List I.A.6 [5-14-10 RSR], at 1). LPG would be stored in depleted salt caverns in the Syracuse salt formation on property known as the Watkins Glen brine field owned by applicant's affiliate, U.S. Salt (see id.). Specifically, as originally proposed, applicant would convert salt caverns in Finger Lakes (FL) Gallery 1 (wells 33, 43, 34

⁷ Note that Department staff's document list updated February 9, 2015, incorrectly identifies applicant's November 18, 2010 submission (Doc. List I.A.10) as NOIA 3 Revised Response. Document List No. I.A.10 has been correctly identified as NOIA 2 Revised Response on the attached document list. Only one response to the Department's third NOIA was filed by applicant, Doc. List I.A.12. The attached document list has been corrected to identify that document as NOIA 3 Response.

⁸ As noted above, applicant now proposes to eliminate the project's truck and rail components (see OHMS Doc. No. 00067).

and 44 after workovers and new wells were drilled) and FL Gallery 2 (well 58) to LPG storage service (see id.).⁹

The Syracuse salt formation, in which the depleted salt caverns are located, is located at depths between 2,040 feet and 2,790 feet below the surface, as measured at well 34 (see Map, Vertical Section B-B' [South-North] Well Caverns 31, 33, 43, 34, 44, 52, 57, 18 & 17 [2000-00-01-17 SHT 1, rev. 9] [Vertical Section B-B' Map], OHMS Doc. No. 00003, Doc. List I.A.32). The formation consists of bedded salt interlayered with shale. Underlying the Syracuse salt is the Vernon shale at depths below 2,790 feet. Overlaying the Syracuse salt is the approximately 80-foot thick Camillus formation, which consists of shale and dolomite and is located between 1,960 and 2,040 feet below the surface at well 34.

Applicant described the LPG storage operations as follows:

“The cavern(s) in each gallery will initially be full of brine (as they are now). A multi-state split case centrifugal pump will be used to transfer product to the cavern from the TE Products Pipeline Company, LLC (“TEPPCO”) pipeline or via rail or truck. During the injection cycle, brine will be displaced out the bottom of the cavern as the LPG is pumped in the top. The process will be reversed during the withdrawal cycle when brine is pumped into the bottom of the cavern and LPG is withdrawn from the top. A surface pressure of approximately 1000 psi will be maintained when the well is closed and a minimum of 500 psi when in operation when LPG is in the cavern, depending on the surface elevation of the well and depth of the cavern.

“LPG can be received by pipeline (TEPPCO), truck or rail. The pipeline will feed the suction of the high pressure pump for injection directly into the cavern in the injection cycle at an initial design rate of 5,100 Barrels Per Day (BPD) to 48,000 BPD. The railrack (to be constructed on property recently acquired by Finger Lakes) is capable of loading or unloading 24 rail cars in 12 hours with space to park 24 rail cars. Surge capacity (bullet storage tanks) will consist of 5-30,000 gallon vessels, which can be used for butane or propane. The truck rack is capable of loading or unloading 30 trucks/day”

(5-14-10 RSR, id., Doc List I.A.6, at 1-2).

⁹ For a non-confidential index map showing the approximate location of the Watkins Glen brine field wells involved in this matter, see C.H. Jacoby and L.F. Dellwig, *Appalachian Thrusting in Salina Salt, Watkins Glen, New York*, at 228, Fig 3, in A.H. Coogan (ed.), *Fourth Symposium on Salt: Northern Ohio Geological Society* (1974) (Jacoby & Dellwig 1974), reproduced in DEC Staff Initial Post Issues Conference Brief, Appdx E (OHMS Doc. No. 00037 [hereinafter Index Map]). Well 58 is located approximately 575 feet west of well 30 on the index map.

Applicant stated that out of the existing sonar determined storage capacity for FL Gallery 1 of approximately 5 million barrels, it sought authorization to store 1.5 million barrels of LPG in Gallery 1 (see id. at 2) . Applicant also sought authorization to store up to 600,000 barrels of LPG in FL Gallery 2 (see id.).¹⁰

In its May 14, 2010 RSR, applicant reviewed the regional geology of the Watkins Glen brine field in which the salt caverns are located, and a history of the development of the salt caverns and associated wells. Applicant also reviewed the testing and studies conducted to assess the integrity of the wells and caverns. This testing included vertilogs to test the integrity of the well casing, hydrotests and brine pressure tests to test the caverns and wells, gamma ray and neutron logging to assess cavern lithology, sonars to assess the thickness of salt pillars among FL Gallery 1, FL Gallery 2, and other natural gas caverns in the area, and core testing on cores taken from two wells – well 58 in FL Gallery 2 and well 59 located in a nearby gallery known as Arlington Gallery 1 – conducted by RE/SPEC Inc. Other studies and analyses reviewed included a rock mechanics report for FL Gallery 2, and a finite element analyses (FEA) prepared by Dr. Kittitep Fuenkajorn to evaluate how the FL Gallery 1 caverns will behave over time at various operating and testing pressures. Applicant also reported on the brine pressures encountered when the various plugged wells were reopened, and the results of subsidence monitoring. Applicant also reviewed the work of C.H. Jacoby and L.F. Dellwig concerning faulting in the Watkins Glen brine field. Finally, applicant detailed its safety and emergency shut down procedures, including daily monitoring of well head pressures of its storage wells, and its MIT procedures. Based on the above testing and analyses, the RSR concluded that the proposed galleries may be safely operated for LPG injections and withdrawals under constant hydraulic pressures (see id. at 19).

In response to the Department’s second NOIA, applicant submitted, among other documents and reports, a final FEA that evaluated how both FL Gallery 1 and FL Gallery 2 will behave over time at various operating and testing pressures (see Fuenkajorn, Final Report, Finite Element Analysis on Caverns 33 and 43, 34/44 LPG Gallery, Gallery 10, and Well 58 of Finger Lakes LPG Storage, LLC [Sept. 2010], OHMS Doc. No. 00003, Doc. List I.A.8, Exh C [revised FEA]).¹¹

¹⁰ According to its August 8, 2016 project modification proposal, Finger Lakes LPG now seeks authorization to store a maximum of 1.5 million barrels of LPG in the form of propane in both FL Gallery 1 and 2, with a maximum of 600,000 barrels in FL Gallery 2 (see OHMS Doc. No. 00067). Department’s staff updated draft permit reflects these limits (see OHMS Doc. No. 00069).

¹¹ As noted above, applicant submitted two responses to the Department’s second NOIA: a response dated September 28, 2010 (NOIA 2 Response, OHMS Doc. No. 00003, Doc. List I.A.8), and a revised response dated November 17, 2010 (NOIA 2 Revised Response, id., Doc. List I.A.10). The revised FEA was attached as Exhibit C to the September 28, 2010 response to the second NOIA.

With respect to the proposed layout of wells and caverns associated with FL Gallery 1, applicant currently proposes to plug and abandon all wells originally associated with wells 33, 34, 43 and 44 (see BSK to DEC, Response to Third NOIA [4-19-11], OHMS Doc. No. 00003, Doc. List I.A.12, at 6; Email, FL to DEC [3-7-13], id., Doc. List I.A.24). Two new wells, wells FL1 and FL2, would be drilled into the caverns originally associated with wells 34 and 44, respectively (see Response to Third NOIA, id., Doc. List I.A.12, at 6). Well FL1 would be used for the injection and withdrawal of LPG, which is to be stored in the cavern associated with well 34 (see id.; see also Vertical Section B-B' Map, id., Doc. List I.A.32). Well FL2 would be used as a monitoring well and only to recover LPG that moves into the cavern associated with well 44 (see id.). Although applicant proposes to eventually use the cavern associated with well 33 for the storage of LPG, it does not currently propose drilling a replacement well for well 33 (see Map, id.).

3. Department Staff's Application Review

After reviewing applicant's permit application and all supplemental responses to the NOIAs, and after receiving a determination from the Acting Associate State Geologist approving the project (see Letter, New York State Geological Survey to DEC [3-15-13], OHMS Doc. No. 00003, Doc. List I.A.25), Department staff concluded that applicant demonstrated cavern integrity and that the project could be approved subject to the conditions of the draft permit. Information supporting staff's conclusion included the re-entry pressures measured by applicant when it reopened the plugged wells in each gallery (see Peter S. Briggs Affidavit in Support of DEC Staff Initial Post Issues Conference Brief [4-15-15] [Briggs 4-15-15 Affid], OHMS Doc. No. 00037, at ¶ 19). The re-entry pressures, which were greater than the anticipated LPG operating pressures, demonstrated that the galleries were able to contain fluid over an extended period of time (approximately five years for FL Gallery 1 and six years for FL Gallery 2) at pressures greater than those that would be used during applicant's proposed storage operation (see id.).

Other information relied on by Department staff to support its conclusion was the successful long-term brine pressure tests applicant conducted on each proposed storage gallery at pressures greater than operating pressures (see id., ¶¶ 20-21); the inherent suitability of salt at depth for underground gas storage; the documented tendency of salt to close and heal fractures, resulting in healed fractures that are substantially stronger in tension than the original primary salt (see C.H. Jacoby, Storage of Hydrocarbons in Cavities in Bedded Salt Deposits Formed by Hydraulic Fracturing 466-467 [1969], DEC Initial Post Issues Conference Brief, OHMS Doc. No. 00037, Appdx B [Jacoby 1969]); and applicant's revised FEA, which predicted that the caverns will be stable under anticipated operating conditions and pressures for the expected life of the facility.

Department staff also noted the successful 20-year operation of an LPG storage facility known as the Seneca Lake Storage Facility, Arlington Gallery 2, located adjacent to the proposed FL Galleries 1 and 2, in depleted salt caverns also located in the same Syracuse salt formation as applicant's proposed galleries (see Briggs 4-15-15 Affid, at ¶ 23).¹²

The draft permit proposed by Department staff contains multiple provisions for monitoring and protecting cavern integrity (see DEC Staff Draft Permit Conditions [updated 8-16-16], OHMS Doc. No. 00069 [Updated Draft Permit]; see also Summary of Select Draft Underground Storage Permit Conditions, Briggs 4-15-15 Affid, Attachment). These conditions include:

¹² Arlington Gallery 2 consists of interconnected depleted salt caverns associated with U.S. Salt's wells 30, 31 and 45 (see Index Map). Arlington Gallery 2 is located approximately 575 feet to the east of FL Gallery 2 (well 58) and 505 feet to the south of FL Gallery 1 (see Vertical Section A-A' [West-East] South Brine Field Seneca Storage Galleries 1 and 2, and Well 58 [2000-00-01-16 SHT 1 Rev. 9], OHMS Doc. No. 00003, Doc. List I.A.32 [Vertical Section A-A' Map]; Vertical Section B-B' Map, id.).

Applicant originally proposed Arlington Gallery 2 as FL Gallery 2 (see Reservoir Suitability Report [filed 10-9-09], id., Doc. List I.A.2, Tab C, at 6). Arlington Gallery 2 was operated as an LPG storage facility from 1964 to 1984, when product was removed and the wells plugged in 1989 (see id.). In 2014, the current owner of Arlington Gallery 2, Arlington Storage Company LLC (Arlington), also an affiliate of Finger Lakes LPG and a subsidiary of Crestwood, received approval from the Federal Energy Regulatory Commission (FERC) to convert Arlington Gallery 2 to natural gas storage service (see Briggs 4-15-15 Affid, at ¶ 23; see also Arlington Storage Company, LLC, 147 FERC ¶ 61,120 [May 15, 2014] [May 2014 FERC Certificate Order]).

Arlington also operates Arlington Gallery 1 as a natural gas storage facility (see May 2014 FERC Certificate Order P 4). Arlington Gallery 1 consists of depleted salt caverns associated with U.S. Salt's wells 27, 28, 46, and 59 (see Index Map [well 59 is adjacent to well 46]), and is located approximately 320 feet to the east of Arlington Gallery 2 (see Vertical Section A-A' Map).

Recent press reports indicate that Arlington has abandoned the Arlington Gallery 2 natural gas storage project (see e.g. David L. Shaw, Crestwood Backs Out of Natural Gas Storage Plan, http://www.fltimes.com/news/crestwood-backs-out-of-natural-gas-storage-plan/article_53e307dc-3648-11e7-8949-43b68f4f7862.html [May 11, 2017]). Applicant has not provided any formal notice for the record in this proceeding, however. Accordingly, this ruling assumes that the Arlington Gallery 2 natural gas storage project is still being pursued.

- draft permit condition 1, which requires applicant to operate the field in accordance with its application, which in turn requires daily pressure readings at all storage wells, resulting in the daily monitoring of cavern integrity;
- draft permit condition 1(b), which requires the daily monitoring of the salt saturation level of the brine used as displacement fluid, and use of brine from the base of the brine ponds to limit cavern growth from operational solutioning;
- draft permit conditions 1(i) and 2, which requires sonar surveys at specified periods at intervals not to exceed 10 years, or when the gallery reaches its permitted maximum storage capacity or span. The results are to be compared to the cavern growth models in the FEA, and corrective action taken if needed;
- draft permit condition 3, which requires complete MITs at a pressure equivalent to at least 0.75 psi/ft (the maximum allowable storage) and less than 0.80 psi/ft prior to the initiation of storage operations and every five years thereafter, to verify the integrity of the wells and caverns at or above maximum operating pressures. The 0.80 psi/ft maximum pressure for the MITs is well below the fracture pressures recorded at the site (1.26 to 1.70 psi/ft);
- draft permit condition 4, which requires routine subsidence surveys at least every two years;
- draft permit condition 5, which requires production casing evaluations and inspections for all storage and monitoring wells in the storage galleries;
- draft permit condition 6, which authorizes the Department, for reasonable cause, to require the performance of additional sonar surveys, well and cavern MITs, subsidence surveys, casing evaluation and inspection logs, or any other tests or procedures, and require reporting and analysis to verify compliance with permit conditions in the draft permit, or any New York State statute, rule, regulation or order. The Department may also require additional tests or procedures, analysis, or corrective actions based on its review of any report; and
- draft permit condition 8, which requires the prompt (orally within two hours of discovery, in writing within 24 hours of discovery, and as required by all applicable statutes and regulations) of any non-routine incidents that may affect the environment or the health, safety, welfare or property of any person. Non-routine incidents include, but are not limited to, any indication of the abnormal presence of storage gas or product displacement fluid outside the storage reservoir or wells authorized by the permit, and casing failures, cement failures, wellhead failures, fires, blowouts and spills. Condition 8 also requires the immediate cessation of any action causing or suspected of causing the non-routine incident, and the immediate initiation of remedial action. The condition also authorizes the Department, for reasonable cause, to require the cessation or suspension of storage operations, or partial or complete removal of LPG from the caverns.

4. Cavern Integrity Issues

a) Active Rock Faults

Both GFS and SLPWA seek to raise multiple issues concerning the integrity and, therefore, the adaptability of the depleted salt caverns proposed to be used by applicant for LPG storage (see ECL 23-1301[1][b]). In their petitions, GFS and SLPWA each argue that active rock faults are not accurately identified or adequately characterized by applicant and that those faults pose unacceptable risks to cavern integrity and increase the risks of significant adverse impacts to Seneca Lake. Petitioners argue that these deficiencies constitute material defects or omissions in the permit application or its supporting documentation that require denial of the underground storage permit (citing Matter of Seven Springs, ALJ Ruling on Issues and Party Status, August 23, 2002).

Major faulting posited by petitioners include a north-south strike-slip fault, first documented by Charles Jacoby and referred to as the Jacoby-Dellwig Fault or the Seneca Lake Fault, that allegedly extends through the Watkins Glen brine field to the east of wells 41, 37 and 29, and west of well 28 (see SLPWA Petition for Full Party Status, OHMS Doc. No. 00021 [SLPWA Petition], Attachment C, at 29, Exh 3). This places the fault approximately 500 feet to the east of FL Gallery 1, and approximately 1,500 feet to the east of FL Gallery 2 (see GFS Petition for Full Party Status, OHMS Doc. No. 00020 [GFS Petition], Exh 1, Exh B and D). SLPWA asserts that the fault, which was formed millions of years ago during the Alleghanian orogeny,¹³ extends vertically through the Syracuse salt formation into the Camillus shale and other overlying formations and essentially up to the surface (see SLPWA Petition, Attachment C, at 32, Exh 6). In support of the existence and extent of the Seneca Lake fault, SLPWA offers a report by its expert, Raymond C. Vaughan, Ph.D. (see id., Attachment C [Vaughan Report]) and GFS offers a report by its expert, H.C. Clark, Ph.D. (see GFS Petition, Exh 1 [Clark Report]). Petitioners criticize applicant for “improperly” omitting the Seneca Lake Fault from the engineering drawings that show the stratigraphic cross-sections of the storage caverns.

In its petition, SLPWA also postulates the existence of a thrust fault caused by neotectonic processes that allegedly connects the Watkins Glen brine field directly to Seneca Lake. In support of this thrust fault, SLPWA offers a report by its expert, Alberto S. Nieto, Ph.D. (see SLPWA Petition, Attachment B [Nieto Report]). In the Nieto Report, the thrust fault is referred to as a re-interpretation or re-formulation of the Seneca Lake Fault (see id. at 1, 2). In the corrected figures submitted with SLPWA’s petition, the reinterpreted Seneca Lake Fault is depicted as extending through wells 30 and 31 and ending at the bottom of the sediments to the west of Seneca Lake’s center (see id., Fig. 1 [corrected figure submitted Jan. 29, 2015]). In exhibits attached to SLPWA’s Post Issues Conference Brief, the reinterpreted fault is depicted as

¹³ The Alleghanian orogeny is a geological mountain-forming event that occurred approximately 325 million to 260 million years ago and resulted in the formation of the Appalachian and Alleghany Mountains.

ending at the bottom of the sediments in the center of Seneca Lake (see OHMS Doc. No. 00041, Exh H). SLPWA asserts that this thrust fault is recent in origin, consistent with current seismicity near the lake, and explains the increase and decrease in salinity measured at the lake.

Other faulting alleged by SLPWA includes minor faulting identified by Jacoby and Dellwig, and fracture intensification domains (FIDs) associated with all faults in the area. SLPWA asserts that the faulting provides pathways through which brine and LPG may migrate.

Petitioners' offers of proof are insufficient to raise adjudicable issues regarding the integrity of the depleted salt caverns proposed for LPG storage by applicant and the suitability of the salt formations surrounding those caverns. With respect to the salt formations in which the depleted salt caverns are located, Department staff's analysis relied, in significant part, on two features of bedded salt, or halite, at depth. First, halite at depth is inherently well suited for underground gas storage because it is highly incompressible, nonporous, and almost impermeable below about 300 meters (see e.g. C.A. Baar, *Applied Salt-Rock Mechanics 1*, at 88-90 [1977]). Second, staff relied on the well-documented ability of the subject salt formations to heal faults, whether caused in the past by tectonic forces or, more recently, by hydraulic fracturing, through the deposition of salt and calcite, resulting in "healed" fractures that are substantially stronger than the original salt deposits (see e.g. Jacoby 1969). The ability of the Syracuse salt formation to heal fractures was further confirmed, in Department staff's analysis, by the re-entry pressures encountered when some of the brine-filled caverns were re-opened (see Briggs 4-15-15 Affid, at ¶ 19), and the long history of successful LPG storage in the other depleted salt caverns in the Watkins Glen brine field located in the same Syracuse salt formation, among other things.

In response, SLPWA's expert, Dr. Vaughan, asserts that Department staff places too much reliance on the known property of salt to close faults. Dr. Vaughan claims that applicant's assertion that salt plasticity has enclosed the existing faults is an overly broad claim that lacks supporting evidence (Vaughan Report at 14). Dr. Vaughan questions whether supporting core samples are truly representative. Dr. Vaughan further argues that reliance on the known properties of salt fails to take into account the alleged:

- Inability, or limited ability, of salt to enclose large but structurally weak blocks of shale;
- Limited ability of salt to penetrate, bind, and seal fault gouge;
- Voids that may exist within the salt; and
- Ongoing bedrock response to regional tectonic or valley stress relief

(id. at 14-15). However, Dr. Vaughan offers no factual or scientific evidence in support of his assertions. Dr. Vaughan offers no core sampling data in support of his assertion that any core sampling relied upon by applicant are not representative. Nor does Dr. Vaughan provide or otherwise cite any factual or scientific studies or other foundation supporting his views regarding weaknesses in salt formations or the ability of salt formations to heal faults, or that such weaknesses exist in the subject Syracuse salt formation. In contrast, Department staff's analysis

is amply supported by the work of Jacoby and others (see e.g. Jacoby 1969; C.H. Jacoby, Effect of Geology on the Hydraulic Fracturing of Salt at 318 [1965], DEC Initial Post Issues Conference Brief, OHMS Doc. No. 00037, Appdx C [Jacoby 1965]). Thus, Dr. Vaughan fails to raise any adjudicable factual or scientific issues regarding the Syracuse salt formation's suitability for the storage of LPG. Moreover, none of petitioners' other experts directly address the issue of the ability of the Syracuse salt formation to heal faults or otherwise raise adjudicable factual or scientific issues regarding that property. Thus, petitioners' offers of proof are insufficient to raise adjudicable issues regarding the impermeability of the Syracuse salt formation or its ability to close any fractures that occurred in the past or may occur in the future and, thus, the formation's suitability for the storage of LPG.

Petitioners' failure to raise adjudicable issues regarding the characteristics of the Syracuse salt formation as a suitable medium for the storage of LPG renders their remaining arguments regarding large scale and other active faulting academic. As an initial matter, and contrary to petitioners' assertions, applicant did consider the existence of the Seneca Lake Fault and provided an analysis of its potential impacts. Department staff concluded that the Seneca Lake Fault did not intersect any of the caverns proposed for LPG storage, was too remote from the gas storage galleries to present a threat, and was likely confined to the salt formation and healed in any event. Moreover, Jacoby and Dellwig's report concerning attempts to hydrofracture connections between wells on opposite sides of the Seneca Lake Fault supports the conclusion that the fault presents an obstacle to, rather than a conduit for, brine flows across the fault (see Jacoby and Dellwig 1974, at 232).

Petitioners fail to raise adjudicable issues regarding staff's analysis. Although Dr. Vaughan does cite some authority supporting the conclusion that the Seneca Lake fault may extend into the Camillus and other formations overlying the Syracuse salt formation (see Stone & Wheeler Engineering Corp., New York and Ohio Technical Update and Summary [Oct. 1979], § 2.1.4, Table 2, and Fig 57 [Structure Map of Central New York]; see also id., Fig 26 [Elevation and Thickness of the Camillus Formation in New York], Fig 63 [Structure Contours on Top of the Onondaga Formation in New York], and Fig 64 [Elevation and Thickness of the Tully Formation in New York]), he fails to provide any factual or scientific foundation supporting the conclusion that the fault remains open in the Syracuse formation, or that open faults exist that connect the gas storage galleries to the Seneca Lake Fault. Thus, litigating whether the Seneca Lake Fault extends above the Syracuse salt formation and into the Camillus and other formations would constitute an academic exercise.

Similarly, the faulting proposed by SLPWA's other expert, Dr. Nieto, also raises at most academic questions. Dr. Nieto's "re-interpretation" of the Seneca Lake Fault as a thrust fault lacks any factual or scientific foundation. Even assuming the Seneca Lake Fault is a thrust fault, litigating its existence and whether it provides an open pathway for brine or LPG to leak into Lake Seneca is academic given the lack of any proof of faulting connecting the proposed thrust fault to applicant's proposed gas storage galleries. The same analysis applies to any faulting associated with valley down carving proposed by Dr. Nieto (see Nieto Report, Fig 6).

b) Horizontal Stresses

SLPWA also argues that horizontal stresses in the Syracuse salt formation not accurately identified or adequately characterized by applicant pose an unacceptable risk to cavern integrity and increase the risk of significant adverse impacts on Seneca Lake. SLPWA asserts that two sources of horizontal stresses on bedrock exist in the Finger Lakes region: (1) a regional tectonic stress field, and (2) more localized stress fields that exist in and around bedrock valleys, including the water-filled valleys of the Finger Lakes such as Seneca Lake. SLPWA asserts that these horizontal stresses were not evaluated in the application materials. In support of its argument, SLPWA cites to the reports of its experts, Dr. Vaughan and Dr. Nieto.

Review of the Vaughan and Nieto Reports, however, reveal that SLPWA again fails to raise any adjudicable issues. Although the Vaughan Report states that the two stress fields referenced above are “increasingly well-understood and need to be taken into account” (Vaughan Report at 10-11 [footnote omitted]), the report makes no offer of proof concerning how the consideration of horizontal stresses would alter any conclusions regarding cavern integrity. Moreover, although the Vaughan Report asserts that applicant erred in calculating the depth to bedrock in the center of Seneca Lake and, thus, committed “a serious error with respect to assessing the horizontal stress associated with deep bedrock valleys” (*id.* at 10), the report makes no offer of proof indicating how this “serious error” affects the cavern integrity analysis. Thus, the Vaughan Report raises at most unsubstantiated uncertainties and speculation.

The Nieto Report similarly raises at best unsubstantiated and conclusory assertions. Much of the discussion of horizontal stresses in the Nieto Report is raised in support of the existence of the re-interpreted thrust fault Dr. Nieto proposes (*see* Nieto Report at 2, 4), and, therefore, lacks direct relevance to cavern integrity.

Where the Nieto Report addresses horizontal stresses directly, it either misinterprets data, or fails to offer proof of the implication of any alleged failure to analyze the alleged horizontal stress. First, the Nieto Report criticizes RE/SPEC’s alleged failure to recognize “core diskings” as evidence of high horizontal stresses during coring operations on Well 59 (*see id.* at 4 [citing Tim J. Vogt, RE/SPEC Inc., Coring Activities NYSEG Well 59 (Jan. 1996), Reservoir Suitability Report (May 14, 2010), Exh 18, OHMS Doc. No. 00003, Doc. List I.A.6]). However, as noted by Department staff, review of the RE/SPEC report reveals that the breaks in the Well 59 core were either drilling or handling induced. SLPWA does not refute this in subsequent submissions.

Second, the Nieto Report alleges that a recent sonar profile of Well 58 shows that its roof is sagging and that this condition is evidence that a “strong horizontal stress field” is buckling the base of the Camillus formation (*id.* at 5). As discussed below in connection with GFS’s petition (*see* Section III.A.4[h] below), Dr. Nieto’s opinion is based upon a

misinterpretation of the sonar data which, when properly interpreted, leads to the conclusion that Well 58's roof is not sagging.

Third, the Nieto Report asserts that the FEA conducted by applicant's expert, Dr. Fuenkajorn, is invalid because it fails to take into account the horizontal stresses asserted by SLPWA (see Nieto Report at 4-5). In particular, the Nieto Report criticizes the FEA for failing to take into account the horizontal stresses allegedly associated with Seneca Lake's deep bedrock valley. The report also criticizes applicant's response when the issue of the potential influence of Seneca Lake's deep bedrock valley was raised by Dr. Richard A. Young in a letter submitted during FERC's review of the Arlington Storage Gallery 2 (see Letter from Dr. Richard A. Young to Moneen Naismith, Esq., Earth Justice [Oct. 4, 2013], SLPWA Post Issues Conference Brief, Exh G, OHMS Doc. No. 00041 [Young Letter]).

SLPWA's offer of expert proof fails to raise any adjudicable issues regarding the FEA or applicant's response to Dr. Young's critique. First, nothing in Dr. Nieto's background suggests that he has any particular expertise in conducting FEAs. In addition, nothing in the Nieto report indicates how the cavern integrity analysis would change if the horizontal stresses proposed by Dr. Nieto are taken into consideration (see Briggs 4-15-15 Affid, at ¶ 26). At most, the Nieto report simply urges that the FEA should be re-run.

Dr. Nieto's report also fails to rebut the substance of applicant's response to Dr. Young. After Dr. Young's October 2013 letter was brought to Department staff's attention, staff asked applicant to evaluate whether the conclusions contained in the FEA would be impacted by Dr. Young's discussions regarding abnormal valley stress conditions. In a memorandum dated January 6, 2014, applicant's geologists, Leonard Dionisio and John Istvan, in consultation with Dr. Fuenkajorn, responded to staff's query (see Memorandum from Dionisio and Istvan to Peter Briggs [Jan. 6, 2014], OHMS Doc. No. 00003, Doc List I.A.30). First, the memorandum notes that the proposed storage galleries are not located directly under the valley under Seneca Lake (see id. at 1). This supports the conclusion that the proposed caverns would not be subject to the faulting proposed by Dr. Young and Dr. Nieto (see Young Letter, at 8; see also Nieto Report, Fig 6).

Second, Dr. Fuenkajorn noted that FL Gallery 1 is located under the slope of the valley and between 1,600 to 2,000 feet below the surface. He concluded that to have any significant stress effect induced by the deep valley, the elevation difference between the hill and the valley would have to be over 1,000 feet. The difference between the depth of the valley and the hill for FL Gallery 1 is approximately 286 feet, according to Dr. Fuenkajorn (see Memorandum at 2).

The memorandum concludes:

“Since the cavern facility is under the slope of the valley (and not the valley itself), the lateral stresses on the cavern field will be greater than what was used in the FEA model.

However, this has no adverse effect. In fact, the additional lateral stress should increase cavern roof stability during the withdrawal period. Cavern roof lateral stresses are not adversely affected during hydrocarbon injection since pressure change is gradual. The maximum storage pressures determined at the casing shoe by the FEA model become even more conservative, as well”

(Memorandum at 2).

In response, the Nieto Report offers no factual or scientific proof refuting the memorandum’s conclusion. At most, the report asserts without foundation or support that the “general statements about predicting rock engineering behavior based on a two dimensional finite element analysis, regardless of the sophisticated constitutive models of their computer codes (Fuenkajorn and Serata, 1993), have no room in the context of this application” (Nieto Report at 5). The report’s conclusory and unsupported assertions are insufficient to raise an adjudicable issue concerning the adequacy of the FEA and the memorandum in response to the Young letter.

The Vaughan Report similarly fails to raise an adjudicable issue regarding the FEA and applicant’s response to the Young letter. At most, the Vaughan Report raises general criticisms of the Dionisio and Istvan memorandum and makes no specific offer of proof indicating how the analysis would differ if the proposed valley stress effects are taken into account (see Vaughan Report at 20). In addition, nothing in Dr. Vaughan’s background suggests that he has any particular expertise in finite element analysis.

Finally, as noted by Department staff, the literature concerning valley stress effects, including literature cited by SLPWA, does not support the existence of stress-relief effects associated with glaciated valleys filled with water and sediments -- such as Seneca Lake - - in the location and depths of applicant’s salt caverns (see e.g. William J. Brennan, Stress-Relief Phenomena Observed During Solution Mining in Western New York at 11 [1996], reproduced in DEC Post Issues Conference Reply Brief, OHMS Doc. No. 00051, Appdx C). Accordingly, SLPWA fails to raise an adjudicable issue concerning horizontal stress effects on cavern integrity.

c) Potential for Brine Leaks

SLPWA offers as its third issue the assertion that the poorly understood potential for brine leaks from the salt caverns poses an unacceptable risk to cavern integrity and increases the risk of significant adverse impacts on Seneca Lake. In support of this issue, SLPWA offers the opinion of Dr. Vaughan, who asserts that the known surface inputs of chloride to Seneca Lake are insufficient to account for the high measured chloride level in the lake. Citing the work of M.R. Wing and others, Dr. Vaughan asserts that approximately 170 million kg of salt is being added to the lake annually from other sources, including saline groundwater intrusion into the

lake from underlying salt beds (see Vaughan Report at 12). Dr. Vaughan also asserts that a sudden jump in chloride concentrations occurred in the 1960, coinciding with the beginning of the period from 1964 to 1984 when TEPPCO stored pressurized LPG in the two salt caverns now known as Arlington Gallery 1 and 2 (see id. [citing Wing et al. and J.D. Halfman]). Dr. Vaughan also notes that a gradual decline in Seneca Lake chloride levels started at about the same time TEPPCO stopped storing LPG in those two caverns in 1984.

Given the above, Dr. Vaughan argues that the possibility of a pathway for brine leakage connecting the salt caverns to Seneca Lake must be considered. Dr. Vaughan calculates that a hypothetical pipe or borehole only a few inches in diameter would be large enough to carry 170 million kg salt annually into Seneca Lake (see id. at 13-14).

As discussed further below (see Section III.A.5 below), Department staff takes issue with whether the salinity of Seneca Lake is attributable to gas storage in the Watkins Glen Brine Field, or due to other more likely causes. In the context of SLPWA's third proposed issue, the source of Seneca Lake's salinity is academic. Even assuming small fractures in the gallery walls and disturbed rock zone microcracks in the vicinity of the walls posited by Dr. Vaughan, as concluded above, SLPWA has made no sufficient offer of proof to support the existence of any pathway for brine leakage from any small fractures and microcracks through the impermeable Syracuse salt formation and into Seneca Lake approximately 1,200 feet away in the case of FL Gallery 1, or approximately 1,600 feet away in the case of FL Gallery 2.¹⁴ Thus, SLPWA's hypothetical brine leakage pathway remains exactly that, hypothetical, and is unsupported by any adjudicable factual showing.

SLPWA also opines that "rock movements from time to time" and "intermittent collapse" in the brine field described by Jacoby, or small earthquakes, such as the magnitude-2 earthquake that occurred on September 10, 2013 epicentered near Himrod, New York, that occur after successful pressure tests might result in the leakage of brine or LPG (see Vaughan Report at 22-23). This assertion, however, is rebutted by the draft permit conditions that require pressure testing prior to the storage of LPG in FL Gallery 1, the daily pressure testing of all wells during the storage period, and the execution of emergency procedures if a leak is detected (see Updated Draft Permit Conditions 1, 1[h], 8; see also Summary of Select Draft Underground Storage Permit Conditions, Briggs 4-15-15 Affd, Attach, at 2, 4-5). Thus, SLPWA fails to raise an adjudicable issue concerning the potential for leaks as a result of earthquakes and other rock movements occurring after successful pressure tests.

In support of its third issue, SLPWA also raises concerns about a pressure increase that occurred during a June 2009 pressure test of FL Gallery 1. In response, Department staff notes that it was aware of the pressure increase on Well 33 during the 2009 test (see May

¹⁴ For purposes of these approximations, I referenced corrected Figure 1 of the Nieto Report (see OHMS Doc. No. 00021).

14, 2010 RSR, Exh 11). Department staff explains, however, that the focus of pressure tests is on pressure drops, not increases, and that the 2009 test successfully demonstrated that FL Gallery 1 held pressure over the final ten day test period (see DEC Staff's Post Issues Conference Reply Brief, OHMS Doc No. 00051, at 54-55). This test together with the reentry pressure encountered when Well 33 was reopened demonstrated the integrity of FL Gallery 1. Thus, SLPWA fails to raise any adjudicable issue regarding the 2009 test.¹⁵

d) On-going Enlargement of Caverns

In its fourth proposed issue, SLPWA argues that the planned ongoing enlargement of the salt caverns as a result of operational solutioning poses an unacceptable risk to cavern integrity and an increased risk of significant adverse impacts to Seneca Lake. In support of this issue, SLPWA offers the opinion of Dr. Vaughan, who asserts that this deliberate cavern-enlargement process guarantees that the caverns will be larger in the future and will not be same caverns that were pressure tested (see Vaughan Report at 23). Dr. Vaughan contends that the gradual cavern enlargement through the use of under-saturated brine for gas displacement may intersect zones of weakness or fluid-transmissive zones, which include (1) the Seneca Lake fault; (2) deformations by Alleghanian thrusting in the interbedded salt-rock matrix that forms the walls of the caverns; (3) the inability or limited ability of salt to enclose large but structurally weak blocks of shale; (4) the limited ability of salt to penetrate, bind, and seal fault gouge; and (5) voids that may exist within the rock-salt matrix (see id.). Consequently, Dr. Vaughan contends that a "brine-budget" should be established, although he also opines that such a budget may, in actuality, be too complicated and error-prone to be effectively implemented (see id. at 23-24).

In response, Department staff asserts that some on-going operational solutioning is expected and planned for (see 5-14-10 RSR, OHMS Doc. No. 00003, Doc. List I.A.6, at 16), and does not pose a risk to cavern integrity. First, staff asserts that fully saturated brine cannot be used in gas storage operations due to possible "salting" and blockage of the product displacement tubing (see DEC Staff Initial Post-IC Brief at 55-56 [citing Istvan Memorandum at

¹⁵ In its letter responding to applicant's August 2016 project modification proposals, SLPWA offers "new" information purportedly relevant to the June 2009 pressure test (see Letter, SLPWA to Chief ALJ [8-22-16], OHMS Doc. No. 00071, at 2). The information consists of a November 12, 2009 internal email from Department employee William Glynn, in which Mr. Glynn reports observing brine leaks from Wells 33 and 43 that day (see id., Exh A). Putting aside the question whether SLPWA has made a sufficient showing that this "new" information was not reasonably available at the time the petitions were due in this matter, an email concerning observations made in November 2009 is insufficient to raise doubt about the pressure test conducted in June 2009. Moreover, both wells will be plugged, thereby addressing any brine leakage issues. Accordingly, SLPWA's late-submitted information raises no adjudicable issues.

9, OHMS Doc. No. 00030]). In addition, staff argues that draft permit conditions mitigate the impacts of any cavern enlargement resulting from operation solutioning.

SLPWA fails to raise any adjudicable issues relating to on-going cavern enlargement due to operational solutioning. As concluded above, SLPWA fails to make a sufficient offer of proof substantiating the existence of any of the “zones of weakness” or “fluid transmissive zones” alleged by Dr. Vaughan (see Section III.A.4[c] above). Moreover, reference to the draft permit conditions cited by Department staff show that staff has fully mitigated any potential impacts associated with operational solutioning. Those conditions include: (1) requiring use of brine from the base of the brine ponds for product displacement fluid; (2) daily monitoring of the salt-saturation level of product displacement fluid; (3) limiting cavern growth to 2 percent by volume on a calendar year basis; and (4) limiting the final cavern dimensions (see Updated Draft Permit Conditions 1[a]-[e]). In addition, the FEA took into account the final cavern dimensions when evaluating cavern stability over the life of the project. Once the final cavern dimensions are reached, applicant will have to apply for a new permit before further storage operation can occur. Thus, SLPWA’s issue is fully rebutted by reference to the application materials and Department staff’s draft permit conditions.

e) Abandoned Salt Cavern

In its fifth proposed issue, SLPWA asserts that an abandoned salt cavern associated with Well 43 and located below FL Gallery 1 was not taken into account either for bedrock modeling or as a possible link in a leakage pathway. In support of this issue, SLPWA offers Dr. Vaughan’s report. In that report, Dr. Vaughan identifies the abandoned cavern as a cavern that appears below FL Gallery 1 in a sonar from 1976 (see Vaughan Report, Exh 8, at 34). Although Dr. Vaughan acknowledges applicant’s conclusion that the cavern is now filled with rubble and no longer exists, he nonetheless contends that the cavern needs to be taken into consideration in any bedrock modeling for the overlying gallery (see id. at 11-12). Dr. Vaughan also asserts that testing must be done to determine whether the abandoned cavern is hydraulically connected to FL Gallery 1 and, if not, to determine the integrity and durability of the seal between the cavern and FL Gallery 1 (see id. at 12). Dr. Vaughan further asserts that the abandoned cavern was not taken into account in the FEA conducted by Dr. Fuenkajorn or in the modeling conducted by RE/SPEC (see id. at 19-20). Dr. Vaughan also asserts that the FEA did not analyze the southern part of FL Gallery 1 where Wells 33 and 43 are located (see id.).

SLPWA fails to raise an adjudicable issue regarding any alleged abandoned cavern associated with Well 43. As noted by Department staff, during the permit application review process, staff asked applicant to clarify the status of the cavern appearing below FL Gallery 1 in the 1976 sonar (see Briggs 4-15-15 Affid, OHMS Doc. No. 00037, at ¶ 27; Second Notice of Incomplete Application [8-12-10], OHMS Doc. No. 00003, Doc. List I.A.7, at 8). In response, applicant verified that the cavern space depicted in the 1976 sonar is filled with rubble as a result of solutioning that occurred after the 1976 sonar was taken, and not an abandoned

cavern as asserted by Dr. Vaughan (see Briggs Affid at ¶ 27; Response to Second NOIA [9-28-10], OHMS Doc. No. 00003, Doc. List I.A.8, at 8; Response to Second NOIA [revised 11-17-10], OHMS Doc. No. 00003, Doc. List I.A.10, at 8). Moreover, the rubble pile filling the cavern depicted in the 1976 sonar, as well as all rubble piles associated with the FL Galleries 1 and 2, were tested during the long-term pressure tests conducted by applicant. Those tests confirmed that all caverns, including the cavern associated with Well 43, are pressure tight and have pressure integrity beyond that proposed for LPG storage. Thus, SLPWA fails to raise any adjudicable issues regarding the integrity of the cavern associated with Well 43.

SLPWA also fails to raise an adjudicable issue regarding the FEA's analysis of the southern part of FL Gallery 1. Review of the final FEA reveals that the caverns associated with Wells 33 and 43 were conservatively modeled by using the mirror image of the much larger caverns associated with Wells 34 and 44 and Gallery 10 in their place (see Final FEA, OHMS Doc. No. 00003, Doc. List I.A.8, Exh C at 12-13). Thus, contrary to Dr. Vaughan's assertion, the final FEA modeled the southern portion of FL Gallery 1 and concluded that the associated caverns would be mechanically stable at the various operating pressures over the life time of the project. SLPWA makes no offer of proof raising questions about this methodology or the FEA's conclusions. Accordingly, SLPWA fails to raise an adjudicable issue concerning the FEA.

f) Sufficiency of Gallery Maps and Cross Sections

In addition to the issue of alleged active rock faults discussed above, GFS raises several additional issues concerning cavern integrity in its petition and post issues conference filings. First, GFS asserts that the gallery maps and cross-sections contain data gaps and errors that require correction. Specifically, GFS asserts (1) the lack of a comprehensive gallery map showing all faults, fracture systems, lineations, historical cavern outlines, fracture pathways, and fracture histories; (2) the failure of the cross-sections to include thrust faults and tear faults, and to correctly display the cavern floors as mounds of broken rubble rather than solid rock; and (3) the failure to fully characterize the size and shape of the rubble pile at the bottom of some of the caverns associated with the neighboring Arlington Galleries 1 and 2. In support of its arguments, GFS offers the cavern integrity report by Dr. H.C. Clark (see GFS Petition, OHMS Doc. No. 00020, Exh 1 [Clark Report]).

In response, Department staff argues that the gallery maps and cross-sections, as modified and supplemented in response to staff's inquiries during the permit application review process, provided staff with sufficient information to understand the geology relevant to the proposed project and, together with the other information in the application, allowed staff to analyze and draw conclusions about potential cavern integrity issues. Staff notes that GFS cites no industry standards violated by the final versions of the cross-section and gallery maps. Moreover, staff notes that it does not expect applicants to display all geologic data on a single set of maps. Rather, staff reviews the entire application, including the maps together with sonar

surveys, geophysical logs, isopach and structure contour maps, and other information and studies, to gain a complete understanding of the geologic setting of a proposed project.

GFS's arguments concerning the sufficiency of the cross section and gallery maps fail to raise an adjudicable issue. Department staff has indicated that the final maps were sufficient for its permit application review. Absent citation to any industry standards applicable to the maps, arguments about how much information is enough for permit application review are not adjudicable (see Matter of Akzo Nobel Salt, Inc., Interim Decision of the Commissioner, Jan. 31, 1996, at 9-10).

Moreover, review of the issues conference record makes clear that Department staff understood the geological setting of the proposed project based upon all the information supplied by applicant during the permit review process, not just the maps. Staff was aware of the proximity of the Seneca Lake fault. However, because that fault does not intersect any of the caverns proposed for LPG storage, staff did not require the fault to be displayed on the maps. (See Briggs 4-15-15 Affid, at 7 ¶ 22.) Moreover, although the maps do not depict rubble floors, Department staff understood that the cavern floors are made of rubble piles left over from the solution mining of the interbedded salt caverns, and that the various sonar surveys show the growth of the rubble piles as the cavern floors migrated upward (see II Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program, at 14-3a, Fig 14.4 [1992]; Briggs 4-15-15 Affid, at 9, ¶ 27; Briggs Affid in Support of DEC Reply Brief [5-29-15], OHMS Doc. No. 00058 [Briggs 5-29-15 Affid] at 10-11, ¶ 23). Whether the cross-section maps should have displayed the rubble piles differently is not an adjudicable issue.

GFS argues that the failure to accurately depict the rubble piles constitutes an incomplete characterization of both the caverns and the rubble, and will increase the risk of delayed leakage detection. First, GFS asserts that the failure to completely characterize the rubble piles means that the maximum storage capacity of the galleries is unknown. GFS argues that, as a result, applicant will be unable to accurately determine the amount of brine required to fill the void spaces in the rubble and, thus, maintain the maximum fill level of the LPG floated above the brine. Second, GFS argues that the flushing of unsaturated brine through the rubble pile may open leakage pathways into planes of weakness that have not been identified. GFS also claims that the use of unsaturated brine will result in the dissolution of the salt "lip" that separates Cavern 34, in which LPG is planned to be stored, from Cavern 44, which is not planned for LPG storage.

GFS's arguments are unpersuasive. As Department staff explains, the caverns are already brined-filled. Thus, applicant will not need to calculate the amount of brine required to fill the caverns. Rather, brine will be displaced, stored, and monitored when LPG is pumped into and out of the storage caverns. Second, all storage activities, including the displacement of brine during LPG storage, will occur above the existing rubble piles. Thus, the rubble piles will not be flushed with under-saturated brine as GFS suggests. (See Briggs 5-29-15 Affid, at 10-14, ¶¶ 23-28.) In addition, the maximum LPG fill level is above the level of the salt "lip" and, accordingly,

the lip will not be subject to operational solutioning. Finally, the proposed storage pressures are well below the pressures historically required to fracture the Syracuse formation. Thus, an unexpected fracturing of the formation is unlikely to occur in any event. GFS's issues are rebutted by the application documents and plans and, accordingly, no adjudicable issue is presented.

In his report, Dr. Clark also asserts that the maps fail to show the interconnections among the caverns that make up FL Gallery 1. However, maps showing the interconnections were included in the application materials (see e.g. Response to Third NOIA [4-19-11], OHMS Doc. No. 00003, Doc. List I.A.11, Exh B, 19th unnumb pg [1979 map]), and were recently updated and made available to the parties to the issues conference (see Alpha Geoscience, Assessment of the Technical Suitability of Finger Lakes Galleries 1 and 2 for Storage of LPG [2-9-15], OHMS Doc. No. 00030 [Gowan Report], Fig 2). As a result of the maps and other information included with the application, including the FL Gallery 1 pressure testing results, Department staff was aware of the interconnections among the FL Gallery 1 caverns (see Briggs 4-15-15 Affid, at 6-7, ¶¶ 20-21). Again, whether that information should have been included on the gallery maps and cross sections does not present an adjudicable issue.

g) Other FL Gallery 1 Integrity Issues

GFS argues three additional issues concerning the integrity of FL Gallery 1. First, GFS asserts that a "hanging ledge" of salt comprising a portion of the cavern associated with Well 43 is poised to fall (see Clark Report at 26; see also Letter from Jason McCartney, Sonar Well Services, Inc. to Leonard Dionisio, Inergy Services [4-5-10], Fig 1 and 2, NOIA Response [5-14-10], OHMS Doc. No. 00003, Doc. List I.A.5, Exh D). When it does, GFS contends, the cavern will grow vertically taking the roof closer to cap rock and producing unintended and unknown cavern dimensions. GFS asserts the issue is adjudicable because the FEA does not address the hanging ledge, there are no plans to monitor for its fall, and the next sonar survey would not occur for 10 years.

No adjudicable issues are presented by the hanging ledge in Cavern 43. As noted by Department staff, GFS presents no offer of proof that the ledge is "poised" to fall. Moreover, Cavern 43 is not proposed for the storage of LPG and, thus, the cavern and its hanging ledge will not be subjected to operational solutioning. Even assuming the ledge does fall, as noted by applicant, it will fall into the rubble pile at the floor of Cavern 43 without impacting Well FL 1, which is in Cavern 34, leaving approximately 224 feet of salt between the roof of Cavern 43 and the Camillus cap rock. In the event the ledge falls, any new cavern dimensions and associated brine storage volumes would be recalculated based upon subsequent sonar surveys and reevaluated, as required by draft permit conditions (see Updated Draft Permit Conditions 1(i) and 2).

Second, GFS asserts that the current brinefield map (see OHMS Doc. No. 00003, Doc. List I.A.32), which is based on sonar images, shows Cavern 34 with a perfectly flat western boundary. Because no salt caverns have perfectly flat sides, GFS asserts that the map is inaccurate and, therefore, does not provide a baseline for monitoring cavern growth. Moreover, GFS asserts that if the actual wall is beyond the flat border depicted on the map, applicant is already in violation of draft permit condition 1(e), which limits cavern growth to the ultimate cavern dimensions depicted on the gallery maps.

GFS's second issue does not present an adjudicable issue. Department staff noted the linear cavern side during its permit application review and sought an explanation from applicant (see NOIA, OHMS Doc. No. 00003, Doc. List I.A.4, at 3). Applicant provided a response, explaining that the outline of caverns 34 and 44 was derived from a composite of sonars taken in each cavern and shows the maximum dimensions from each (see NOIA Response [5-14-10], OHMS Doc. No. 00003, Doc. List I.A.5, at 4 and Exh D [Sonar Well Services Inc. Letter (4-5-10)]). Department staff deemed applicant's response satisfactory (see Second NOIA [08-12-10], OHMS Doc. No. 00003, Doc. List I.A.7, at 3). In particular, Figure 14 attached to Sonar Well Services' April 2010 letter shows that the actual western boundary of Cavern 34 does not extend beyond the linear western boundary derived from the Cavern 44 sonars. GFS does not offer any proof refuting this explanation. Accordingly, no adjudicable issue concerning the boundary of Cavern 34 is presented.

Finally, GFS argues that the integrity of FL Gallery 1 cannot be established until the current leak in the adjacent Gallery 10 is located and eliminated.¹⁶ In support of this issue, GFS offers Dr. Clark's report (see Clark Report at 27-29). As noted by applicant, however, Gallery 10 is addressed in the draft permit. Draft permit condition 1(h) requires that prior to the first injection of LPG into FL Gallery 1, applicant must demonstrate that Gallery 10 is pressure tight. Condition 1(h) also requires the continuous pressure monitoring of Well 52 in Gallery 10, and a 50-psig pressure change in 24 hours is reportable to the Department. GFS offers no proof challenging the adequacy of these conditions. Accordingly, an adjudicable issue is not presented.

h) Other FL Gallery 2 Integrity Issues

GFS alleges that the three most recent sonar surveys of FL Gallery 2 -- from 2009, 2011, and 2013 -- reveals that the roof of Cavern 58 is dropping in height, sagging in the middle, and threatening to collapse. In support of this issue, GFS offers the report of Dr. Clark (see Clark Report at 17-21). In his report, Dr. Clark opines that Cavern 58 has a history of roof collapse that resulted in the abandonment and plugging of Well 58 in 2003. Dr. Clark further asserts that comparisons of sonars taken in 2011 and 2013 reveal that Cavern 58's roof has dropped five feet raising concerns about current roof stability and risk of collapse. Finally, Dr.

¹⁶ Gallery 10 is located north of FL Gallery 1 and composed of Caverns 52, 57, and 18.

Clark questions the suitability of the Camillus shale as capstone, noting zones of porosity documented in that formation over Cavern 58.

Allegations of Cavern 58's roof collapse prior to 2003 were examined in the application materials and shown to be incorrect (see 5-14-10 RSR, at 4-6). The sonar engineer, Larry Sevenker, whose recommendation resulted in the plugging of Well 58 in 2003 has retracted his conclusion about the inferred roof collapse based upon more recent sonars and mechanical integrity testing of the cavern (see Sevenker Letter [1-15-13], OHMS Doc. No. 00003, Doc. List I.A.23). The sonars and other evidence supplied during the permit application review process demonstrate the lack of a roof collapse in Cavern 58, and GFS offers no proof to contradict that evidence. According, no adjudicable issue is raised.

With respect to the alleged sagging roof, comparison of the 2009, 2011, and 2013 sonars reveals that the roof of Cavern 58 has been stable and has not dropped in height, after correcting for a five-foot misalignment in the 2013 survey (compare 5-14-10 RSR, Exh 7, unnumb pgs 20-27, OHMS Doc. No. 00003, Doc. List I.A.6 [2009 sonar]; Well Logs and Reports, unnumb pgs 25-30, 38-50, OHMS Doc. No. 00003, Doc. List I.A.16 [2011 sonar]; Logs and Sonars, unnumb pgs 29-36, OHMS Doc. No. 00003, Doc. List I.A.27 [2013 sonar]; see also Gowan Report at 28 [describing misalignment of the 2013 sonar survey]). Well cores from Wells 58 and 59 reveal that the rock quality of the Camillus formation is good, with fracturing healed by salt and calcite (see Sample Description and Core Log, OHMS Doc. No. 00003, Doc. List I.A.6, Exh 5 [Well 58 core]; Vogt, Coring Activities, at 7, OHMS Doc. No. 00003, Doc. List A.I.6, Exh 18 [Well 59 core]). Moreover, the zone of porosity referenced in the materials is located in the Bertie formation, which lies above the Camillus formation, and has limited permeability (see Briggs Affid [5-29-15], OHMS Doc. No. 00058, at 7-9, ¶¶ 15-16). Again, GFS offers no proof refuting this evidence and, thus, GFS raises no adjudicable issues concerning Cavern 58's roof or the integrity of the Camillus formation as capstone for the cavern.

GFS also notes that the roof of Cavern 58 has already reached the Camillus formation and, therefore, lacks a salt layer for support. GFS asserts that the draft permit condition that requires a blanket of LPG to protect cavern roofs from operational solutioning (see Updated Draft Permit Condition 1[f]) serves no purpose in Cavern 58, which lacks a salt roof. GFS's argument is unpersuasive. Although the current roof of Cavern 58 is unsupported by salt, Cavern 58 is expected to grow in volume as a result of operational solutioning (see Vertical Section A-A', OHMS Doc. No. 00003, Doc. List I.A.32). The LPG blanket is expected to protect any new roof from operational solutioning. In any event, the issue is not adjudicable.

i) Additional Testing and Proposed Permit Conditions

In its final issues regarding cavern integrity, GFS asserts that additional testing is needed before the Department decides whether to grant a permit for applicant's project.

Specifically, GFS asserts that seismic surveys should be required to “fill data gaps” regarding the shape and volume of rubble-filled portions of all caverns; the source of the leak in Cavern 52 (which is part of Gallery 10); the relationship between Wells 57 and 18 (also in Gallery 10); and the relationship between Cavern 29 and the Seneca Lake fault and any pathway from Cavern 29 to the surface.

If the application is granted, GFS argues that a number of additional permit conditions should be imposed. In support of the additional testing and permit conditions, GFS cites Dr. Clark’s report (see Clark Report at 31-34).

The Clark Report fails to raise adjudicable issues or justification for the additional testing and permit conditions requested by GFS. The Clark Report makes no offer of proof challenging the sufficiency of the pressure testing conducted by applicant, which is the industry standard for assessing the cavern integrity, or establishing that seismic testing is necessary. Moreover, as noted above, the rubble-filled portions of the caverns will not be used for LPG storage and, therefore, no further characterization of the rubble is required. As also noted above, draft permit conditions require applicant to prove Gallery 10 is pressure tight before LPG is injected into FL Gallery 1, and to continuously monitor Gallery 10 thereafter. These permit conditions address and render academic the need for any further study of Gallery 10 and its wells. Finally, with respect to Well 29, it is not proposed for LPG storage. Having failed to offer proof in support of any viable pathways for the leakage of LPG or brine from FL Gallery 1 or 2 to Well 29, any further study of Well 29 is also academic.

With respect to the additional permit conditions requested by GFS, several of them are already addressed in the draft permit as noted by Department staff. GFS asserts that applicant should be required to measure pressures, salinity, temperature, and other easily measured variables at injection and withdrawal, and monitoring wells. As staff notes, however, the draft permit requires daily monitoring of wellhead pressures together with regular sonar surveys, mechanical integrity tests, and production casing evaluations and inspections. GFS makes no offer of proof challenging the sufficiency of these testing protocols.

With respect to subsidence monitoring, draft permit condition 4 requires that all wells, including future wells, be included in applicant’s subsidence monitoring plan. Moreover, as staff notes, using wells anchored into bedrock as subsidence monuments ensures minimal impact from weather-induced movement. Thus, GFS’s request for permit conditions requiring subsidence monitoring designed to minimize weather effects is addressed by the draft permit.

The Clark Report offers no justification for the additional subsidence monitoring, or the installation of bore hole seismic and other sensors. Nor does the Clark Report explain how monitoring protocols imposed on other facilities that do not involve the storage of LPG in solution-mined salt caverns located in interbedded salt formations are relevant to or necessary for applicant’s project. Thus, GFS provides no justification for imposing these additional permit requirements on applicant’s project.

j) Conclusion

Finally, in determining whether petitioners have raised adjudicable issues regarding cavern integrity, their proposed issues must be considered in light of mitigation measures Department staff has included in the draft permit (see 6 NYCRR 624.4[c][2]; Matter of Giardina, Interim Decision of the Commissioner, Sept. 21, 1990, at 2-3). Many of the draft permit conditions included by staff to evaluate and monitor cavern and well integrity during the life of the project are discussed above. In addition, the draft permit includes requirements for immediate action in the event problems with cavern or well integrity are suspected. Under the draft permit, Finger Lakes is required to orally report to the Department within two hours of discovery any non-routine incidents that may affect the environment or the health, safety, welfare or property of any person (see Updated Draft Permit Condition 8). Oral reports are required to be followed up with written reports within 24 hours of discovery, or as required by all applicable laws and regulations of the Department, including reports to the DEC Spills Hotline (see id.). Non-routine incidents include, but are not limited to, any indication of the abnormal presence of storage gas or product displacement fluid outside the storage reservoirs authorized by the permit, or the wells accessing the storage galleries. Non-routine incidents also include any well casing failures, cement failures, wellhead failures, fires, blowouts and spills. (Updated Draft Permit Condition 8.)

In the event of a non-routine incident, Finger Lakes is required to immediately cease any action or condition known or suspected to cause or contribute to the non-routine incident, and commence appropriate initial remedial action, provided the environment or the health, safety, welfare or property of any persons would not be further endangered. Moreover, for reasonable cause, the Department may require the cessation or suspension of injection of LPG into any storage gallery or cavern, or partial or complete removal of LPG from any individual storage gallery or cavern, and all storage galleries authorized by the permit. Finally, the draft permit states that pursuant to ECL 23-1301(2), the Department may revoke or suspend the permit for failure to comply with its terms or for failure to comply with the reporting requirements of ECL 23-1301(4). (Updated Draft Permit Condition 8.) Accordingly, the draft permit contains mitigation measures designed to address any cavern integrity issues, in the event they arise. Petitioners' offers of proof raise no issues concerning the adequacy of these measures.

In conclusion, petitioners fail to raise any adjudicable issues regarding cavern integrity. At most, petitioners merely raise uncertainties without any factual, scientific or technical bases. Moreover, the draft permit addresses many of the issues raised by petitioners, requires regular evaluation and monitoring of cavern and well integrity, and imposes measures to immediately respond to any cavern or well integrity problems in the event they do arise. Accordingly, no adjudicable issues regarding cavern integrity are presented for hearing.

5. Potential Salinization of Seneca Lake

SLPWA, GFS, and SL Communities each argue that the application and DSEIS fail to address adequately the potentially significant impact that LPG storage in the depleted salt caverns of the Watkins Glen Brine Field may have on the salinization of Seneca Lake. As noted above in section III.A.4(c) in the context of SLPWA's petition, petitioners cite the historic "spike" in chloride concentrations in Seneca Lake that occurred in the mid-1960s. Petitioners assert that this "spike" in the salinity of Seneca Lake coincides with the period from 1964 to 1984 when TEPPCO stored pressurized LPG in the two salt caverns now constituting Arlington Galleries 1 and 2. Petitioners argue that all other potential sources of industrial discharges to the Lake are insufficient to account for the level of salinization. Petitioners contend that the only plausible explanation for the spike in salinity is that LPG storage in the Syracuse formation forces either brine or high-salt groundwater into the Lake.

Each petitioner proposes a different mechanism for salt water intrusion into Seneca Lake as a result of LPG storage. As noted above, SLPWA relies on the report of its expert Dr. Vaughan, who posits the existence of pathways for the leakage of brine from the salt caverns through the Syracuse formation and ultimately into Seneca Lake (see Section III.A.4[c] above). As noted above, SLPWA proposes this issue as a cavern integrity issue under ECL article 23.

GFS relies on a report of its expert, Tom Myers, Ph.D. (see Seneca Lake Hydrology Report, GFS Petition, OHMS Doc. No. 00020, Exh 3 [Myers Report]). In his report, Dr. Myers proposes an advection hypothesis, in which pressure changes resulting from the injection and withdrawal of LPG in the caverns induces a pressure pulse in the Syracuse salt formation. That pressure pulse travels about 10 to 14 miles north through the salt layers to where the layers intersect the porous, high-salt sediments of the lake bottom. The pressure pulse squeezes high-salt groundwater out of those sediments and into Seneca Lake, thereby raising the Lake's salinity. According to Dr. Myers's calculations, the amount of chloride forced into Seneca Lake through this advection process is enough to account for the salinity increase that occurred in the 1960s. GFS asserts that the LPG storage project's potential impact on the salinity of Seneca Lake is an adjudicable issue under both ECL article 23 and SEQRA.

In support of its petition, SL Communities offers the opinion of its expert, John Halfman, Ph.D. (see Affidavit of John Halfman, Ph.D. [1-15-15], SL Communities Petition, OHMS Doc. No. 00022, Attachment I [Halfman Affid]). In his affidavit, Dr. Halfman offers to establish both the historic and current salt levels of Seneca Lake, and correlate those levels with solution mining and gas storage in the Watkins Glen Brine Field. Dr. Halfman also offers to establish that the current inputs into the Lake from streams and from mine waste discharges are insufficient to account for the salt levels. He reaches the conclusion that the salt inputs into the Lake are from groundwater flows from the Syracuse salt formation where that formation intersects with the Lake bottom. Dr. Halfman, however, indicates that sufficient information is not publicly available to answer whether solution mining or gas storage influences salt levels in

the Lake. Accordingly, he recommends a year-long pressure test on any proposed cavern with independent monitoring of salt concentrations in Seneca Lake to answer the question. SL Communities also relies upon the Myers Report as the possible mechanism for salt intrusion into the Lake.¹⁷

In response, both Department staff and applicant argue that petitioners have failed to raise an adjudicable issue. First, Department staff takes issue with petitioners' assertion that inputs from industrial and other discharges are insufficient to account for the historically elevated salt levels in the Lake. In support of its argument, staff submits expert affidavits and reports demonstrating that unregulated salt mine waste discharges were likely responsible for the chloride levels recorded in the 1960s, and that the Department's subsequent regulation of those discharges likely resulted in the gradual decline in salt concentrations in Seneca Lake during the subsequent decades (see Affidavit of Linda A. Collart [5-29-15], DEC Staff Reply Brief, OHMS Doc. No. 00051; James E. Huff, Technical Review of the Chloride Effluent Limits in International Salt's Watkins Glen Facility [5-7-81], DEC Initial Post Issues Conference Brief, OHMS Doc. No. 00037, Appdx G).

Second, both Department staff and applicant assert that petitioners failed to provide any scientific support for the claim that LPG storage will increase chloride levels in Seneca Lake. With respect to Dr. Myers's hypothesis, staff and applicant specifically assert that his hypothesis is novel, untestable by his own admission, lacks general acceptance in the scientific community and, therefore, fails to satisfy the threshold test for admissibility under Frye v United States (293 F 1013 [1923]) and People v Wesley (83 NY2d 417 [1994]). In addition, applicant asserts that Dr. Myers's hypothesis is rebutted by the analysis in the FEA.

I agree that petitioners have failed to raise an adjudicable issue concerning the potential for salinization of Seneca Lake as a result of LPG storage in the Watkins Glen Brine Field. The parties have joined issue concerning whether salt mining waste discharges and other industrial discharges in the Seneca Lake area are sufficient to account for the historically elevated salt levels in the Lake. However, in the context of this proceeding, resolving the question would be an academic exercise. None of the petitioners have raised an adjudicable issue on the question whether storage of LPG in the depleted salt caverns of the Watkins Glen Brine Field is the source of the salt intrusions into the Lake.

With respect to SLPWA's proposed mechanism, the issue is analyzed and rejected in section III.A.4(c) above, and will not be repeated here. In sum, SLPWA has not provided a factual basis for its allegation that pathways for brine leakage through small fractures and

¹⁷ SL Communities argues that the issue of salt water intrusion into Seneca Lake, together with other water quality impacts of the proposed project, are adjudicable issues under SEQRA. Because of the similarity of the salt water intrusion issue to the issues presented by SLPWA and GFS, the issue is addressed here. The remaining water quality issues raised by SL Communities are examined in the section on SEQRA below (see Section III.B.2).

microcracks in the Syracuse salt formation and into Seneca Lake exist. Without such a viable pathway for brine leakage, the issue of salt intrusions into Seneca Lake from other sources is academic and irrelevant to this proceeding.

Similarly, GFS and SL Communities have failed to raise an adjudicable issue with respect to their proposed mechanism for the intrusion of high-salt groundwater into Seneca Lake. To the extent they rely on Dr. Halfman's affidavit, Dr. Halfman expressly states that insufficient information exists to determine whether LPG storage operations influence salt levels in the Lake. Thus, Dr. Halfman makes no offer of proof regarding a mechanism by which LPG operations in the caverns could cause the salt levels in Seneca Lake to increase.

With respect to Dr. Myers's advection process hypothesis, petitioners fail to establish that the hypothesis is admissible in any adjudicatory hearing on the application. For a novel scientific theory to be admissible in an adjudicatory hearing, the proponent must establish that the theory is generally accepted among scientists within the pertinent discipline (see Wesley, 83 NY2d at 422). In this case, I instructed petitioners that I would be making an inquiry into the reliability of any novel scientific theories proposed by their experts (see Memorandum to the Service List [3-12-15] [citing Wesley and Matter of St. Lawrence Cement Co., LLC, First Interim Decision of the Commissioner, Dec. 6, 2002, at 10]). Petitioners have not made a sufficient showing under Wesley. At most, GFS asserts that Dr. Myers's advection hypothesis is based upon peer-reviewed literature. However, the literature Dr. Myers relies upon involves groundwater systems not present here, and do not involve salt rock deposits at depth. GFS cites no literature demonstrating general acceptance of the conclusions Dr. Myers draws from the cited literature (see Cornell v 360 W. 51st St. Realty, LLC, 22 NY3d 762, 780-781 [2014]). Moreover, petitioners offer no studies testing Dr. Myers's hypothesis. Indeed, Dr. Myers himself indicates that his proposed advection process is untestable. Accordingly, petitioners have not established that Dr. Myers's advection process has gained sufficient general acceptance in the relevant scientific community to be admissible in the event this matter goes to adjudication.

In support of its expert's hypothesis, GFS argues that the rules of evidence do not strictly apply in administrative adjudicatory proceedings. GFS's argument is unpersuasive. The principle cited by GFS generally means that hearsay evidence is not per se inadmissible in administrative proceedings (see Matter of Tractor Supply Co., Decision and Order of the Commissioner, Aug. 8, 2008, at 2). Although evidence not otherwise admissible in civil judicial proceedings is allowed in agency proceedings, that evidence must nevertheless be sufficiently reliable, relevant and probative to provide a basis for an agency's determination (see id. [citing Matter of Dadson Plumbing Corp. v Goldin, 104 AD2d 346 (1st Dept 1984), affd as modified on other grounds 66 NY2d 713 (1985)]). The Frye/Wesley test for novel scientific theory is a test of that evidence's reliability (see Wesley, 83 NY2d at 422; Parker v Mobil Oil Corp., 7 NY3d 434, 446-447 [2008]). Thus, if the reliability of a novel scientific theory is not established by its general acceptance in the relevant scientific community, it is inadmissible and cannot form the basis of an administrative determination. This principle applies with particular force in

adjudicatory proceedings before the Department in which the weight and reliability of scientific and technical evidence is often examined.

Moreover, Dr. Myers's advection hypothesis is rebutted by the FEA performed by Dr. Fuenkajorn. The FEA examined the impact of various pressure scenarios associated with the LPG storage process on the inter-cavern salt "pillars" that would be involved in applicant's project (see FEA at 15). As explained by Dr. Gowan, the FEA modeled the strain on the surrounding rock caused by pressure within the caverns. The FEA found that the pressure-induced strain extends only a short distance into the surrounding rock and would have no effect on the inter-cavern pillars between the caverns. (See Gowan Report at 43.) Thus, Dr. Myers's proposition that pressure-induced strain on the surrounding rock is capable of producing a "pulse" that travels through 14 miles of salt rock, and forces high-salt groundwater out of the sediment under Seneca Lake is unsupported by the FEA.

Finally, in as much as petitioners have not raised an adjudicable issue concerning a nexus between storage of LPG in deleted salt caverns in the Watkins Glen Brine Field and an increase in the salinity of Seneca Lake, no basis exists for the year-long test proposed by Dr. Halfman. To the contrary, Dr. Halfman's data reveals a steady decline in the level of salinity in Seneca Lake during the period from 1964 to the early 1980s when hydrocarbons were being stored in caverns in the Watkins Glen Brine Field (see Halfman Affidavit at 4, ¶ 10). Given this information, the proposed test is unnecessary.

6. State Geologist Approval

As noted above, the written approval of the State Geologist is required before an underground storage of gas permit may be issued (see ECL 23-1301[1]). In its late-filed supplement to its petition for full party status, SLPWA argues that the position of State Geologist has been vacant since 2010, and that Dr. Andrew Kozlowski lacked the authority to issue the March 2013 letter approving applicant's project (see Letter, New York State Geological Survey to DEC [3-15-13], OHMS Doc. No. 00003, Doc. List I.A.25 [State Geologist Letter]). In support of its argument, SLPWA offers documents from the State Education Department indicating that the Board of Regents has not appointed a State Geologist since Dr. William Kelly retired from the position in 2010. SLPWA also offers a letter from the Director of the New York State Museum responding to SLPWA's Freedom of Information Law (FOIL) request for records relating to any appointment by the Board of Regents to the position of acting State Geologist or State Geologist since 2010. In that letter, the Director stated that "[t]he State Education Department has no responsive records" (Letter, Mark Shaming, Director, New York State Museum to Rachel Treichler [6-16-16], Affirmation of Rachel Treichler in Support of Late-Filed Supplement to Petition for Full Party Status by SLPWA, OHMS Doc. No. 00063, Exh C). SLPWA argues that because the Board of Regents appoints the State Geologist pursuant to Education Law § 235, the lack of documents appointing a State Geologist or Acting State Geologist demonstrates that the position has been vacant since 2010. As further evidence of the

vacancy, SLPWA offers a July 2016 job listing for the State Geologist position from the Education Department's website (see Affidavit of Mary Anne Kowalski in Support of Late-Filed Supplement to Petition for Full Party Status by SLPWA, OHMS Doc. No. 00063, Exh C). Accordingly, SLPWA asserts that Dr. Kozlowski lacked the authority to approve the project in March 2013.

In response, applicant argues that SLPWA has not met the standards for raising a new issue after passage of the deadline for petitions for party status and the conclusion of the issues conference (citing 6 NYCRR 624.5[c]). First, applicant argues that information concerning the status of State Geologist was known well before the deadline for petitions and the issues conference, and could have been raised in SLPWA's petition. Accordingly, applicant asserts that SLPWA has not demonstrated good cause for the late filing. Applicant also argues that considering the issue now will significantly delay the proceeding and unreasonably prejudice applicant and Department staff. Finally, applicant argues that under the Education Law, the Board of Regents does not appoint the State Geologist and, accordingly, the lack of Board records appointing a State Geologist is of no moment.

In its response, Department staff argues that SLPWA's offer of proof is insufficient to overcome the presumption of regularity that attaches to the official acts of governmental officers. Thus, staff asserts that SLPWA has failed to raise a substantive and significant issue. Department staff also argues that SLPWA fails to satisfy the remaining requirements for a late-filed issue, including the failure to demonstrate good case for the late filing and lack of prejudice to applicant and staff.

Technically, because SLPWA filed a timely petition for full party status, its supplemental filing is not a late-filed petition for party status; rather, it is a proposed supplement to its existing petition. Nevertheless, the standards for late-file petitions provided for in 6 NYCRR 624.5(c) are applied to new issues raised by petitioners after the deadline for party status petitions has passed and the issues conference concluded (see Matter of Thalle Indus., Inc., Rulings of the Administrative Law Judge on Party Status and Issues, Dec. 10, 2003, at 24). Under those standards, a petitioner carries the burden of demonstrating that the new issue is substantive and significant, and providing proposed witnesses and offers of proof in support of the issue (see 6 NYCRR 624.5[c][2], [b][2]). A petitioner must also demonstrate good cause for the late filing, show that consideration of the issue will not significantly delay the proceeding or unreasonably prejudice the other parties, and demonstrate that consideration of the filing will materially assist in the determination of the issues (see 6 NYCRR 624.5[c][2][ii], [iii]).

SLPWA's supplemental filing fails to raise a substantive and significant issue concerning Dr. Kozlowski's authority. As noted by Department staff, a presumption of regularity attaches to the official acts of governmental officers (see People ex rel. Wallington Apts., Inc. v Miller, 288 NY 31, 33 [1942]; Prince, Richardson on Evidence § 3-120 [Farrell 11th ed 1995]). The presumption is that no official or person acting under an oath of office will do anything contrary to his or her official duty, or omit anything the official's duty requires to be

done (see Matter of Whitman, 225 NY 1, 9 [1918]). The presumption requires the party opposing its application to come forward with substantial evidence of unlawful or irregular conduct (see People ex rel. Wallington Apts., 288 NY at 33).

Here, contrary to applicant's assertions, SLPWA has provided proof that the Board of Regents appoints the State Geologist pursuant to Education Law § 235, and that the position has been vacant since 2010. However, SLPWA has not provided evidence sufficient to overcome the presumption that Dr. Kozlowski was the Acting State Geologist in March 2013 or that Dr. Kozlowski had the authority as Acting State Geologist to approve applicant's project. Education Law § 235 does not indicate how an acting State Geologist is appointed and SLPWA has provided no other evidence that only the Board of Regents may appoint an acting State Geologist. Thus, the FOIL response from the Director of the State Museum indicating that the Education Department has no records of an appointment by the Board of Regents to the position of Acting State Geologist since 2010 does not establish that Dr. Kozlowski was not so appointed. Nor has SLPWA provided any other evidence that an acting State Geologist lacks the authority to issue approvals pursuant to ECL 23-1301(1). Accordingly, SLPWA fails to raise an adjudicable issue.

In addition, SLPWA has failed to establish good cause for its failure to raise this issue in its petition. SLPWA argues that it first became aware of a potential defect in the State Geologist's approval of applicant's project when an article was published in the local media reporting that on May 16, 2016, FERC granted Arlington Storage Company a two-year extension of time to construct Arlington Gallery 2 (see footnote 12 above). Among the bases for the extension was the circumstance that the Department had been unable to act on Arlington's application for an underground storage of gas permit due to the fact that the State Geologist position "has been vacant since mid-2013" (Arlington Storage Co., LLC, 155 FERC ¶ 61,165, at P 8 [2016]). SLPWA asserts that it acted diligently in raising the issue in this proceeding once it became aware of the issue.

SLPWA's arguments are unpersuasive. The circumstance that Dr. Kozlowski issued the approval in an "acting" capacity is apparent from the face of the March 2013 letter. In addition, the circumstance that the State Geologist position has been vacant since 2010 is a matter of public record. Further, applicant provides public records documenting the fact that there have been two acting State Geologists since 2010; Dr. Langhorne Smith served as Acting State Geologist from Dr. Kelly's retirement to January 2013, and Dr. Kozlowski served as Acting State Geologist from January 2013 to August 2013. Inasmuch as the vacancy in the position of State Geologist has been a matter of public record since 2010, SLPWA has failed to provide good cause for the delay in raising the issue in its petition.

Because SLPWA has failed to raise a substantive and significant issue, and has failed to establish good cause for its late-filed proposed issue, SLPWA's request that its July 26, 2016 supplement be considered a part of its petition for full party status and that the issue be certified for adjudication is denied.

B. SEQRA Issues

In addition to issues concerning review of applicant's project under ECL article 23, title 13, petitioners also raise several issues concerning the Department's review of the project under SEQRA (ECL art 8).

1. Standards of Review for SEQRA Issues

The review of SEQRA issues raised in the context of a Part 624 permit hearing proceeding is limited (see 6 NYCRR 624.4[c][6]). As noted above, where, as here, the Department is the lead agency and has required the preparation of a draft EIS, the determination at the issues conference stage to adjudicate issues regarding the sufficiency of a DEIS or the ability of the Department to make SEQRA findings pursuant to 6 NYCRR 617.9 are governed by the standards set forth in section 624.4(c)(1) (see 6 NYCRR 624.4[c][6][i][b]). Thus, in the context of this proceeding, petitioners have the burden of persuasion to demonstrate that the SEQRA issues they propose are both substantive and significant.

Although the sufficiency of a DEIS may be challenged in a Part 624 permit hearing proceeding, SEQRA does not require the Department to use the adjudicatory forum to resolve the issues raised (see Crossroads Ventures, Interim Decision at 11; St. Lawrence Cement, Second Interim Decision of the Commissioner, Sept. 8, 2006, at 118-120). As stated in Crossroads Ventures:

“The crux of review under SEQRA is identifying the relevant areas of environmental concern, taking a ‘hard look’ at those areas and making a ‘reasoned elaboration’ of the basis for a determination (Matter of Jackson v New York State Urban Dev. Corp., 67 NY2d 400, 417 [1986]; see also Matter of Gernatt Asphalt Prods. v Town of Sardinia, 87 NY2d 668, 688 [1996]). The focus of SEQRA review is whether an action may have a significant impact on the environment. If it is determined that the action may have a significant adverse impact, an environmental impact statement must be prepared (see ECL 8-0109[2], 6 NYCRR 617.1[c]; 6 NYCRR 617.7[a][1]).

“An agency's compliance with its substantive SEQRA obligations is governed by a rule of reason. The extent to which particular environmental factors are to be considered, and the degree of detail required, vary in accordance with the circumstances and nature of particular proposals (see Jackson, 67 NY2d at 417[;] Matter of Akpan v Koch, 75 NY2d 561, 570 [1990]; see also Matter of American Marine Rail, LLC, Interim Decision, February 14, 2001, at 5). Not every conceivable environmental impact, mitigation measure or alternative must be identified and addressed before a final environmental impact statement will satisfy the substantive requirements of SEQRA (see Jackson, 67 NY2d at 417[;] Matter of Aldrich v Pattison, 107 AD2d 258, 266 [1985]).

“As noted, speculative comments or mere expressions of differing opinions without substantiation are insufficient to establish that an issue is substantive and significant. Similarly, in the course of SEQRA review, speculative comments or mere conjecture need not be considered (see Matter of WEOK Broadcasting Corp v Planning Bd. of Town of Lloyd, 79 NY2d 373, 384-85 [1992]; see also Matter of Industrial Liaison Committee of Niagara Falls Area Chamber of Commerce v Williams, 72 NY2d 137, 143 [1988]) [“not arbitrary and capricious or a violation of existing law for [an] agency, when it takes its ‘hard look’ and makes its ‘reasoned determination’ under SEQRA, to ignore speculative environmental consequences”]. Similarly, generalized, non-specific comments about impacts will not advance a SEQRA issue to adjudication.

“The SEQRA regulations direct that an environmental impact statement is to be analytical, not encyclopedic (see 6 NYCRR 617.9[b][1]). There is no requirement that every conceivable possibility be addressed. Where a participant in the Part 624 hearing process seeks simply to add to information on a topic for which the DEIS contains sufficient information, no adjudicable issue is raised. However, such SEQRA-related information would be considered in the ongoing SEQRA process, including but not limited to the preparation of a responsiveness summary as part of the final environmental impact statement [FEIS].”

(Id. at 12-14.) In addition, such SEQRA-related information, as part of the FEIS, will be considered by the final agency decision maker when making the required findings under SEQRA (see St. Lawrence Cement, Second Interim Decision at 120). Thus, an otherwise adequate DEIS may be supplemented by the submissions of the parties at the issues conference and made a part of the SEQRA record and FEIS without subjecting the issues raised to adjudication.

GFS argues that the correction of a deficient DSEIS during the hearing process would require issuance of a new DSEIS for public review and comment before the DSEIS may be finalized and SEQRA findings made. SEQRA and its regulations do not require this, however. Under SEQRA, an agency is required to notice a DEIS for public comment and, at the agency’s discretion, for a public comment hearing (see ECL 8-0109[4], [5]; 6 NYCRR 617.9[a][3], [4]). After the public comment period closes and a hearing, if any, is held, the agency is required to finalize the EIS, including by issuing a response to the comments received, and to make the FEIS available to the public (see ECL 8-0109[6]; 6 NYCRR 617.9[a][5], [b][8]). Nothing in ECL 8-0109 or 6 NYCRR 617.9 requires an agency to prepare a revised DSEIS and notice it for public comment before it is finalized.

Moreover, nothing in Webster Assocs. v Town of Webster (59 NY2d 220 [1983]) requires that raising issues concerning the adequacy of a DEIS through the public comment process requires preparation and noticing of a revised DEIS before it may be finalized. To the contrary, the Court concluded that the failure to include a certain alternative to the subject project in the DEIS was not fatal where the alternative was brought to the attention of the agency and the public during the public comment period and at the public hearing on the DEIS (see id. at 228-

229). Similarly here, applicant's DSEIS has been subject to notice and public comment, two public comment (legislative) hearings, and an issues conference, at which alleged deficiencies in the DSEIS have been identified and discussed. Accordingly, the Department is not required to prepare and notice a revised DSEIS as a result of the public comment and hearing process before finalizing the DSEIS.

In response to applicant's August 8, 2016 project modifications and Department staff's August 16, 2016 updated draft permit, GFS and SL Communities assert that applicant should be required to submit a revised permit application and revised DSEIS incorporating the proposed modifications, and that staff should be required to issue a further revised draft permit before any further review of the application can take place. Again, neither the Department's permit application review procedures nor SEQRA require the additional process requested. With respect to a revised permit application and further revised draft permit conditions, the Department's Part 624 permit hearing procedures are designed and intended to provide an iterative process of project improvement to further reduce adverse environmental impacts identified in the DEIS and through the permit hearing process (see Matter of Haley, Interim Decision of the Commissioner, June 22, 2009, at 6). In addition, final permit conditions may be developed through the permit hearing process to implement the mitigation measures identified (see e.g. Matter of Karta Corporation, Decision of the Executive Deputy Commissioner, April 20, 2006, at passim). Only in circumstances where project modifications are substantial, with potential significant adverse environmental impacts not previously or adequately analyzed, will an applicant be required to submit a revised application (see Haley, at 7). As discussed further below, however, the project modifications proposed here do not fit this circumstance.

With respect to a revised DSEIS, a supplemental EIS may be required if a project sponsor proposes changes that result in one or more significant environmental impacts not addressed, or inadequately addressed, in a draft or final EIS, among other grounds (see 6 NYCRR 617.9[a][7]; see also SEQRA Handbook at 143-145 [2010]). The determination of significance is governed by the same criteria applicable to the initial determination to require a DEIS (see 6 NYCRR 617.7[c]; see also Jackson, 67 NY2d at 430). Thus, if a proposed project modification has the potential for at least one significant adverse environmental impact, a supplemental EIS may be required subject to full SEQRA review procedures (see 6 NYCRR 617.9[a][iii]). If, however, it is concluded that the modifications will not result in significant environmental impacts, a supplemental EIS is not required, and the Department may proceed to finalize the DEIS and issue finding statements (see Jackson, 67 NY2d at 430).

Applicant notes that its project was subject to scoping under SEQRA, and that the Department issued a scoping outline on February 15, 2011 (see DSEIS Final Scoping Outline [Feb. 15, 2011], OHMS Doc. No. 00006, Doc. List IV.D.20 [Final Scoping Outline]). Applicant argues that SEQRA issues not raised during scoping may not be adjudicated unless a petitioner, in addition to establishing that the issues are substantive and significant, makes a showing under 6 NYCRR 617.8(g). This includes a showing of reasons why the information was not identified during scoping and why it should be included at this stage of the review (see 6 NYCRR

617.8[g][3]). Applicant further asserts that even if a petitioner makes the section 617.8(g) showing, whether to include the information in the DSEIS falls within the applicant's discretion (see 6 NYCRR 617.8[h]). Accordingly, applicant contends that at most, any issues not objected to by petitioners during scoping can only be treated as public comments on the DSEIS, and cannot be adjudicated.

Applicant's argument is unpersuasive. Review of the regulatory history of section 617.8(g) reveals that the section was added by the Department to provide a definitive end to the scoping process prior to the development of a DEIS (see Final Generic Environmental Impact Statement on the Proposed Amendments to the State Environmental Quality Review Act [SEQRA] Regulations 6 NYCRR - Part 617, at 58, 63, 64, 67 [1995] [Part 617 FGEIS]; see also Matter of West Vil. Comm. v Zagata, 242 AD2d 91, 97, lv denied 92 NY2d 802 [1998]; St. Lawrence Cement, Initial Rulings of the Administrative Law Judges on Party Status and Issues, Dec. 7, 2002, at 55). Nothing in the regulatory history indicates an intent to prevent an agency from considering substantive and relevant issues raised after the completion of the DEIS, whether by treating the issues raised as comments on a DEIS (see Part 617 FGEIS at 67), by allowing supplementation of the SEQRA record to address deficiencies in a DEIS, or by subjecting the issues to adjudication under Part 624. Thus, section 617.8(g) does not stand as a per se bar to considering whether issues raised by potential intervenors pursuant to section 624.4(c)(6) are adjudicable under section 624.4(c)(1) (see St. Lawrence Cement, Initial Rulings at 55; Crossroads Ventures, Interim Decision at 92-94). Nevertheless, whether an issue was raised during scoping is a relevant consideration when reviewing the application and related documents, and making a determination whether the issue is substantive (see 6 NYCRR 624.4[c][2]).

In summary, with respect to SEQRA issues, the purpose of the issues conference is to determine whether the DSEIS provides an adequate record upon which to make SEQRA findings. If not, the DSEIS may be supplemented either through accepting the submissions of the parties into the SEQRA record or by adjudication if substantive and significant issues requiring adjudication are raised. Once the DSEIS is sufficiently developed, the Department will finalize the DSEIS pursuant to 6 NYCRR 617.9 and issue SEQRA findings pursuant to 6 NYCRR 617.11(d).¹⁸ Those findings will be issued by Department staff on remand if no issues are identified for adjudication (see 6 NYCRR 624.4[c][5]) or by the Commissioner in the event of appeals from the issues ruling or a hearing on issues identified for adjudication (see 6 NYCRR 624.13[c]).

¹⁸ In a Part 624 permit hearing proceeding, the SEQRA record consists of the DEIS, the public comments received, the issues conference record, and other information provided through the adjudicatory process, among other things (see e.g. Crossroad Ventures, Interim Decision at 73 n 21).

2. Impacts on Water Resources

As noted above, in addition to raising issues concerning the potential salinization of Seneca Lake as a result of the underground storage of LPG (see Section III.A.5 above), SL Communities also argues that the DSEIS is insufficient under SEQRA with regard to the analysis of potential surface water impacts from the project on Seneca Lake, specifically from a catastrophic failure of a brine pond. SL Communities argues that the DSEIS fails to analyze adequately the unique environmental setting of the project by not addressing Seneca Lake's high salinity and, therefore, its particular vulnerability to contamination by sodium and chloride; by not analyzing the human health impacts associated with the Lake's level of salinization; by not adequately examining the historic sources of the Lake's high salinity; and by failing to address the inability of municipalities that use Seneca Lake as a source for drinking water to treat high salt levels. By failing to adequately address the unique environmental setting, SL Communities asserts that the DSEIS fails to evaluate potential significant environment impacts from a catastrophic failure of the project's brine pools at a level of detail that reflects the potential severity of the impacts and the reasonable likelihood of their occurrence (citing 6 NYCRR 617.9[b][5][iii]). Accordingly, SL Communities asserts that it has raised adjudicable issues.

In support of its petition, SL Communities proffers the affidavits of municipal officials addressing the inability of those municipalities to treat for salt in drinking water sourced from Seneca Lake. SL Communities also proffers the affidavit and report from Dr. Halfman, which provides a 2014 update on the chloride levels on Seneca Lake (see John Halfman, Ph.D., 2014 Update on the Chloride Hydrogeochemistry in Seneca Lake, New York [Dec. 10, 2014], SL Communities Petition, OHMS Doc. No. 00022, Attachment I, Exh B [Halfman Report]). In his affidavit, Dr. Halfman notes that the most recent survey of Seneca Lake in October 2014 showed that concentrations were 75 mg/L for sodium and 122 mg/L for chloride (see Halfman Affid ¶ 3). Dr. Halfman asserts that this level is above the Department¹⁹ and United States Environmental Protection Agency (USEPA) drinking water advisory level of 20 mg/L. SL Communities also relies on a 2003 USEPA drinking water advisory that examines the health impacts of increased salt level, recommends reducing sodium levels in water to between 30 and 60 mg/L, and reports that levels greater than 120 mg/L presents a health risk to people on sodium-restricted diets (see USEPA, Drinking Water Advisory: Consumer Acceptability Advice and Health Effects Analysis on Sodium [Feb. 2003] [USEPA Drinking Water Advisory]).

SL Communities fails to raise adjudicable issues. Examination of the DSEIS reveals that it provides an adequate analysis of the potential impacts to Seneca Lake from a catastrophic failure of a brine pond (see DSEIS § 4.2.2, OHMS Doc. No. 00006, Doc. List

¹⁹ SL Communities states that the Department's water quality standard for sodium is 20 mg/L. However, the standard cited is for Class GA fresh groundwater, not Class AA fresh surface waters (see 6 NYCRR 703.5[f] Table 1). SL Communities does not identify a Class AA fresh surface water standard for sodium. The Class AA fresh surface water standard for chloride is 250 mg/L (see id.).

IV.A.1 [DSEIS], at 93; see also Final Scoping Outline at 6 [requiring analysis of potential impacts the brine ponds will have on surface water resources, and proposed mitigation measures and alternatives]). The DSEIS notes that Seneca Lake is classified as an AA(TS) water (see 6 NYCRR 898.4 Table I, item 399) and serves as a source of public water supply for the City of Geneva, and the Villages of Ovid, Waterloo, and Watkins Glen (see DSEIS § 4.2.2.1, at 93, 97). The DSEIS also reports that Seneca Lake has seen significant declines in chloride and sodium levels (see id.). The DSEIS notes that ambient chloride and sodium levels concentrations in Seneca Lake are 2 to 10 times higher than the other Finger Lakes, with a reported chloride concentration of 140 mg/L and a sodium concentration of 80 mg/L (see id. at 95). The DSEIS suggests that one explanation for the high salt concentrations relates to the fact that the Lake intersects the Silurian salt beds at its northern end (see id. [citing Michael R. Wing et al., *Intrusion of Saline Groundwater into Seneca and Cayuga Lake* (1995) (OHMS Doc. No. 00033), and Halfman et al., 2006]).

The DSEIS also analyzes the potential for a catastrophic brine pond release (see id. § 4.2.2.2, at 99). The DSEIS concludes that due to impoundment design, operation, maintenance, and contingency measures, breach of a brine pond is an unlikely event (see id. at 99, 101). Nevertheless, the DSEIS examines both short-term and long-term potential impacts on Seneca Lake's salinity levels in the event of a release of over 80 million gallons of brine into the Lake (see id. at 100-101). The DSEIS notes that the long-term impact from a catastrophic brine release would be to increase the lake-wide sodium and chloride concentrations by 2-3%, or 2.4 mg/L for sodium and 3.6 mg/L for chloride. Based upon the background levels used in the DSEIS, such a release would result in total concentrations of 144 mg/L for chloride and 82 mg/L for sodium. The DSEIS concludes that these levels are below the 1988 USEPA four-day average standard of 230 mg/L for chloride, and the one-hour standard of 860 mg/L for chloride. (See id. at 100.)

The DSEIS also analyzes the potential impact of a brine pond release during certain times of the year when mixing of the water in the lake is slower, and the short term impacts at the point of release (see id. at 100-101). Finally, the DSEIS discusses the mitigation measures that would be undertaken in the event of a brine pond release, including a large-volume emergency drawdown of the pond if a breach occurs at a time when the caverns are full of LPG (see id. § 4.2.2.3, at 109-110). Thus, the DSEIS provides an adequate analysis of the direct impacts of a brine pond breach. Moreover, it is unnecessary to resolve the dispute regarding the historic sources of salt in Seneca Lake before SEQRA findings can be made. The sources of the Lake's high salinity need not be determined to assess the potential impacts a brine pond release would have on current salinity levels. Accordingly, no adjudicable issues are raised.

As noted above, in its August 8, 2016 letter, applicant proposes to eliminate the East Brine Pond to address concerns about the proximity of the pond to Seneca Lake and potential water quality impacts from breaches or overflows from that pond. Accordingly, applicant proposes to construct the West Brine Pond only and relocate the flare stack from the East Brine Pond location to the West Brine Pond location.

In response, GFS, with SL Communities joining, argues that applicant's proposal to eliminate the East Brine Pond and Department staff's removal of references to the East Brine Pond in the updated draft permit leave too many uncertainties to analyze at this time. In reply, applicant clarifies that the only impact from eliminating the East Brine Pond is relocation of the flare stack, and that the location and design of the West Brine Pond would remain unchanged from the location and design specified in the September 2012 engineer's report (see 2012 Engineer's Report, Vol. 1, § 3.1, at 10, OHMS Doc. No. 00003, Doc. List I.B.25). Applicant further clarifies that capacity of the West Brine Pond is approximately 806,000 barrels (0.81 million barrels) or approximately 33.9 million gallons (see Letter, Finger Lakes LPG to Chief ALJ [9-12-16], OHMS Doc. No. 00077, at 6-7, Exh. 3 and 4). Applicant also consents to an express permit condition confirming that construction of the East Brine Pond is not authorized.

Provided the above-referenced condition confirming that the East Brine Pond's construction is not authorized is included in the draft permit, applicant's proposed modification does not require further permit or SEQRA review. With respect to the issues raised by SL Communities in its petition, the DSEIS analyzed the potential impacts to Seneca Lake from a release of 80 million gallons of brine from one of the project's brine ponds, which is more than twice the volume of the currently proposed West Brine Pond. Accordingly, applicant's proposed elimination of the East Brine Pond will mitigate the impacts analyzed in the DSEIS and will not result in any increased adverse impacts. Moreover, neither SL Communities nor GFS raised in their petitions any other issues concerning the brine pond or flare stack location or construction. Thus, no adjudicable issues are raised regarding the project modification.

In its August 2016 letter, applicant also indicates its willingness to provide funding and technical resources to support community initiatives regarding water quality in Seneca Lake and the surrounding area. However, as noted by GFS and SL Communities, applicant's offer lacks specifics. Moreover, agreements between an applicant and the host community are generally apart from the regulatory permitting process unless they are offered to address project specific environmental impacts (see Matter of Monroe County [Mill Seat Solid Waste Landfill], Interim Decision of the Commissioner, July 2, 1991, at 8; Matter of Development Auth. of N. Country, Interim Decision of the Commissioner, July 24, 1990, at 1). Here, applicant's proposal does not appear to be offered to address any project-related water quality impacts. Accordingly, applicant's offer should not be considered by the Department in the context of this proceeding or when making SEQRA findings.

In sum, petitioners have not raised adjudicable issues concerning the project's potential impacts on water quality. Nevertheless, the petition, briefs, and supporting reports and affidavits submitted by SL Communities are accepted into the SEQRA record as comments on the DSEIS. Also accepted are Department staff and applicant's briefs and supporting documents in response. Further, applicant's August 2016 letter and the communications submitted in response and reply are accepted into the SEQRA record. Finally, Department staff is directed to

include a condition in the draft permit confirming that construction of the East Brine Pond is not authorized by the permit.

The above-referenced documents and permit condition supplement the analysis provided in the DSEIS and will provide the final decision maker with a full record upon which to make SEQRA findings regarding the potential surface water impacts associated with the project and their significance. This includes the parties' debate concerning the possible sources of the historic salinity levels observed in Seneca Lake, which the final decision maker may consider to the extent the issue is considered relevant to the SEQRA findings.

3. Noise Impacts

GFS seeks to adjudicate issues concerning the sufficiency of the noise analysis provided in the DSEIS. Specifically, GFS contends that the DSEIS's noise analysis (1) improperly limited the "region of influence" or area of interest studied to only the on-site noise sources and receptors in the immediate vicinity of the project, when the project will increase off-site transportation noise; (2) failed to evaluate sufficiently the noise impacts of the project on residential and recreational receptors on the eastern shore of Seneca Lake; (3) failed to properly monitor and report baseline noise levels; and (4) omitted an analysis of effective mitigation measures, especially with respect to the construction phase of the project. In support of its petition, GFS offers a noise review by Sandstone Environmental Associations, Inc. (see Sandstone Environmental Associates, Inc., Noise Review: Proposed Liquid Petroleum Gas Storage Facility Finger Lakes LPG Storage, LLC [Jan. 14, 2015], GFS Petition, OHMS Doc. No. 00020, Exh 4 [Sandstone Report]).

In response, Department staff and applicant note that the noise analysis presented in the DSEIS and subsequently submitted documents is consistent with the Department's guidance, Assessing and Mitigating Noise Impacts, Program Policy DEP-00-1 (Feb. 2, 2001 [DEC Noise Policy]).

Under the final scoping outline, applicant was required to analyze potential noise impacts associated with operation of the facility as originally proposed, including truck and rail terminal operations and compressor station operations (see Final Scoping Outline at 7). In addition, the DSEIS was required to identify and describe measures to avoid or mitigate potential noise impacts, including long-term operational impacts and short-term construction impacts (see id.).

Applicant's noise analysis was presented in the DSEIS and supplemental submissions. The submissions include DSEIS § 4.3 (DSEIS at 110); a sound study by Hunt Engineers, Architects & Land Surveyors revised May 2011 (DSEIS appdx I, Doc. List IV.A.3); a sound study by Hunt revised July 2013 (OHMS Doc. No. 00003, Doc. List I.B.32 [2013 Hunt Study]); and a March 7, 2014 Hunt memorandum (id. [2014 Supplemental Hunt Study]).

The draft permit includes a condition requiring two sound surveys to confirm the results of applicant's sound studies (see Updated Draft Permit, Attach 3, Special Condition Section D: Other, 1. Sound Monitoring, at 16). The first confirmatory survey is to be performed within sixty days after the commencement of the first LPG injection season, and the second within sixty days after commencement of the first LPG withdrawal season. In addition, after the issues conference, applicant proposed, and Department staff accepted, a draft permit condition addressing mitigation of noise impacts from construction activities (see Finger Lakes LPG Post Issues Conference Brief, Exh 8, OHMS Doc. No. 00038).²⁰

Under the DEC Noise Policy, analysis begins with a first level noise impact evaluation (see DEC Noise Policy at 16). The first level evaluation involves determining the maximum amount of sound created at a single point in time by multiple project-related activities, determining the sound levels from those activities at receptor locations either at the proposed facility's property line or on adjacent properties at locations used or inhabited by people, and comparing those sound levels with ambient sound levels. In the first level evaluation, the sound levels at the receptor locations are determined using only distance as an attenuating factor. Ambient sound levels include all existing, non-project related sounds in the area of the receptors, including all natural and human made sounds.

Where the first level evaluation indicates that threshold sound levels are not exceeded, no further analysis is required. For non-industrial settings, such as in this case, the addition of any noise source should not exceed ambient noise by more than 6 dB(A) at the receptor, and not raise the ambient noise level above a maximum of 65 dB(A) at the receptor (see id. at 14). If either of these threshold levels are exceeded, further evaluation should be undertaken and, if necessary, potential mitigation measures considered (see id. at 20-25).

Applicant's 2013 Hunt Study identified three primary sources of noise during facility operations as originally proposed that had the potential to significantly impact ambient noise levels: (1) the truck and rail loading facility on Route 14A; (2) the electric brine pumps located near the brine ponds; and (3) the electric LPG injection pumps located in the plant area. The study identified five receptors in the vicinity of the rail and truck unloading site and the location of brine pump 2, including the property line by Route 14A, the property line with an adjacent industrial use (a truck repair shop), and three residences (see Receptor Locations, 2013 Hunt Study, Fig 1). The study also identified two receptors in the vicinity of brine pump 1 and the LPG injection pump, a cemetery and a hotel (see id., Fig 2). The study analyzed both day and night-time ambient sound levels at the seven receptor sites (see id. Table 2), and determined the sound levels at those receptor locations as a result of facility operations (see id. Table 3). The 2013 Hunt Study concluded that with certain mitigation measures, including the enclosure of

²⁰ I note that Department staff's August 2016 updated draft permit does not include the construction hours condition proposed by applicant. Department staff is hereby directed to incorporate applicant's proposed condition into the draft permit.

a fire pump near the shore of Seneca Lake, the enclosure of the LPG injection pumps, and the construction of berms around the injection and brine pumps, operational activities associated with the project would not exceed the DEC Noise Policy guidelines (see id.). Department staff's analysis confirms this conclusion (see Affidavit of Scott E. Sheeley, OHMS Doc. No. 00037).

The 2014 Supplemental Hunt Study also studied the potential impact of the combined operation of the Finger Lakes LPG facility and the adjacent Arlington Gallery 2 project on the hotel receptor, and concluded that the DEC Noise Policy guidelines would be met. Department staff also confirmed this conclusion (see Sheeley Affid at 7-8).

GFS's petition and the Sandstone Report fail to raise any adjudicable issues concerning the sufficiency of applicant's noise analysis as a basis for making SEQRA findings. First, GFS asserts that the project will increase off-site truck and rail traffic over baseline conditions and, therefore, the Hunt Study improperly limited the analysis to on-site noise sources and receptors in the immediate vicinity of the project. The Sandstone Report states that increased rail traffic on the west side of Seneca Lake and increased truck traffic along Route 14 would result in increased transportation noise in that corridor. Accordingly, the Report asserts that noise should be evaluated at receptors on the west side of Seneca Lake from Watkins Glen at the south to Geneva at the north. The Report also asserts that noise impacts from increased project-related traffic on receptors on the east side of Seneca Lake in the Town of Hector should also be evaluated. (See Sandstone Report at 9-10.)

As an initial matter, under applicant's current proposal, all propane delivered to and from the facility will be by pipeline (see Letter, Finger Lakes LPG to Chief ALJ [8-8-16], OHMS Doc. No. 00067, at 2-3). Delivery of LPG by truck and rail has been eliminated from the project, as well as all transportation facilities associated with truck and rail loading and unloading (see id.; Letter, Finger Lakes LPG to Chief ALJ [9-12-16], OHMS Doc. No. 00077, at 5 and n 7). Moreover, applicant has consented to inclusion of a permit condition confirming that truck and rail transportation are not part of the project (see Finger Lakes LPG Letter [9-12-16], at 6).

Applicant's noise studies did not analyze the off-site transportation-related noise impacts. This was based upon the conclusion in the DSEIS and supporting documents that project-related truck and rail transportation as originally proposed would not significantly increase the truck and rail traffic already existing in the NYS Route 14 corridor on the west side of Seneca Lake and, therefore, not significantly increase off-site traffic-related noise (see e.g. Memorandum, Hunt to BSK [2-9-15], OHMS Doc. No. 00030 [Hunt Memorandum]). Given that applicant has eliminated truck and rail transportation of LPG to and from the facility, any deficiencies in applicant's analysis of the off-site noise impacts of project-related truck and rail traffic is rendered academic. Also rendered academic is GFS's assertion that the Hunt Study failed to analyze the noise impact of truck and rail deliveries in the middle of the night.

GFS argues that the DSEIS failed to evaluate sufficiently the noise impacts of the project on residential and recreational receptors on the eastern shore of Seneca Lake. The Sandstone Report states that what it refers to as the “normal background” sound level in Hector is in the mid to high 20s dB(A) (see Sandstone Report at 7). The Report also notes that noise attenuation over large bodies of water, such as Seneca Lake, is much lower than over land (see id. at 8-9). The Report concludes that due to this effect, project related noise, such as from the fire pumps, would result in noise levels of about 54 dB(A) in Hector, which is 25 dB(A) above the existing “normal” background (see id. at 9). GFS argues that this noise level violates the Policy guideline of no increases of more than 6 dB(A) over ambient sound levels at the receptor.

The Sandstone Report, however, understates the existing ambient sound level in Hector and, therefore, overstates the potential impact from the project. The Sandstone Report does not indicate how it established the “normal” background. Apparently, the Report did not include the existing truck, train, and airplane traffic and other industrial noises in the “normal” background. Nor is there any indication that traffic noise from NYS Route 414, which runs along the eastern shore of Seneca Lake, was included in the background. Accordingly, it does not provide an appropriate existing ambient sound level for comparison, which must include all existing human-made and natural sound sources. In addition, Hunt analyzed the maximum noise level from on-site activities (88.9 dB(A) from train activities) and, assuming no attenuation over water, concluded that those activities would be perceived on the eastern shore of Seneca Lake as 51.9 dB(A) (see Hunt Memorandum). This level is lower than the peak industrial-related levels recorded in the Sandstone Report, which would be part of the ambient sound level in Hector, and below the 65 dB(A) maximum set in the DEC Noise Policy (see Sandstone Report at 7). Moreover, because the maximum noise levels associated with the project related pumps operating without mitigation measures are below the maximum noise level associated with train activities (between 81.5 and 85 dB(A)) (see 2013 Hunt Study, Appdx B, Table 1), it could be reasonably expected that the noise associated with the pumps operating with mitigation would be perceived on the eastern of Seneca Lake at levels below 51.9 dB(A). Thus, GFS has not raised adjudicable issues concerning the DSEIS’s failure to analyze project-related noise impacts on the Town of Hector.

GFS, citing the Sandstone Report, argues that noise sources and receptors have not been adequately mapped, and baseline noise levels have not been properly monitored and reported. Department staff states, however, that the Leq and Lmax measurements provided in the Hunt Study are appropriate and acceptable under the provisions of the DEC Noise Policy and were correctly measured, and that the additional values the Sandstone Report recommends are unnecessary (see Sheeley Affid at 15-16, 17-19). Staff also notes that the Hunt Report has not reported artificially high background levels by recording cicada noise, for example (see id. at 16-17). To the extent the Sandstone Report identified an error in Hunt’s calculation of the train Leq levels, Hunt revised its calculations based on Sandstone’s observations, and concluded that DEC

Noise Policy guidelines would still be met (see Hunt Memorandum at second unnumb page).²¹ In any event, any errors in the calculation of the train Leq levels is rendered academic by the elimination of trains for the transportation of LPG. Accordingly, GFS fails to raise adjudicable issues concerning the Hunt Study's consistency with the methodology provided for in the DEC Noise Policy.

GFS further argues that the DSEIS fails to analyze construction noise impacts. GFS notes that construction of the facility will take approximately six months and will involve a period of 24-hour drilling of additional wells. Even with the new permit condition proposed by applicant and accepted by Department, construction activities may proceed throughout the weekend, and drilling and other continuous well-related activities will be allowed to continue for 24 hours a day for seven days a week. Citing the May 2015 Final Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program (2015 FSGEIS), the around the clock noise level associated with a drilling rig can reach 105 dB(A) (see 2015 FSGEIS, Vol I, at 6-298). By failing to analyze construction related noise, GFS argues that the DSEIS also fails to analyze any potential mitigation measures.

In response, Department staff indicates that the expectation with respect to construction related noise from construction of the brine ponds, plant area, and other infrastructure is that it would be temporary, that is, one construction season or less -- approximately 23 weeks -- from construction of access roads to final seeding (see Sheeley Affid at 8). Noise associated with drilling and construction of the storage and monitoring wells is also expected to be temporary and intermittent (see id.). As described in the 1992 GEIS, the unavoidable adverse impacts associated with drilling include short term negative noise impacts for 5 to 10 days experienced by people living in close proximity to the drill site (see Draft GEIS [Jan 1988], Vol II, at 19-2). Department staff asserts that for construction activity that is temporary in nature, such as here, and involves certain types of heavy machinery for excavation, earthmoving, and equipment installation, mitigation measures generally involve ensuring that all equipment is properly muffled and limiting the hours and days of construction (see Sheeley Affid at 11; see also DEC Noise Policy at 23-24). Staff notes that applicant has agreed to limit construction activity to the hours from 6 AM to 8 PM, except for drilling and other well-related activities that must be performed continuously (see id. at 11-12). Accordingly, staff asserts that no adjudicable issues are presented.

I agree that no adjudicable issues are presented. The DSEIS, as supplemented by staff's review and expectations regarding the unavoidable noise impacts associated with the construction phase of the project, provide the final decision maker with a sufficient basis for analyzing whether all noise impacts have been mitigated to the maximum practicable and, if not, for imposing additional mitigation prior to making SEQRA findings.

²¹ In the Hunt Memorandum's discussion of the results of its recalculation, Hunt references a potentially adverse increase at receptor # 3. That reference contains a typographical error. The receptor actually referenced is receptor # 2, the property line adjacent to the truck repair shop.

In sum, GFS raises no adjudicable issues concerning the consistency of the Hunt Study with the Department's Noise Policy. Nevertheless, GFS's petition and briefs, and the responses thereto, are accepted into the SEQRA record as comments on the DSEIS and may be considered by the decision maker when evaluating the mitigated and unmitigated noise impacts associated with the project, and balancing those impacts against the other required considerations when making SEQRA findings on the project. Moreover, Department staff is directed to include in the draft permit a condition confirming that LPG will not be transported to or from the facility by either truck or rail, and that the construction of facilities for the loading and unloading of LPG to or from trucks or rail cars is not authorized.

4. Impacts on Public Safety

Under the final scoping outline, applicant was required to evaluate the incremental increases in truck and rail traffic associated with the facility's operation as originally proposed, and analyze their impacts on safety, among other things (see Final Scoping Outline at 7-8). In addition, applicant was required to address other impacts on public safety, including the availability and adequacy of emergency services to handle ordinary and catastrophic accidents that may occur at the facility or in transportation of product, and potential public safety impacts arising from transportation accidents and catastrophic failure of any part of the facility (see *id.* at 8). The final scoping outline specifically required applicant to discuss the appropriate and authorized use and adequacy of the rail crossing of the Watkins Glen Gorge Bridge under the proposed rail load operating scenarios (see *id.*).

Applicant's analysis of the public safety impacts arising from facility operations and product transportation are included in the DSEIS and other submissions on the application. Traffic and transportation impacts are discussed in section 4.4 of the DSEIS (see DSEIS § 4.4, at 120). Other impacts on public safety are discussed in section 4.6 (see *id.* § 4.6, at 144). The DSEIS also identifies: proposed mitigation measures, safety and shutdown procedures (see *id.* § 4.1.3.3, at 83-84); safety training that will be undertaken (see *id.* § 4.6.3, at 156, 160; see also Updated Draft Permit, Condition 7); the safety-related agencies with jurisdiction over operations (see *id.* at 155-156); and the accidental release prevention and emergency response policies that will be implemented, including a hazard and operability study conducted every five years to evaluate the facility's process for identifying and eliminating hazards and their causes before they occur (see *id.* at 157).

The discussions in the DSEIS are supplemented by a quantitative risk analysis prepared by Quest Consultants Inc., which provides an analysis of the level of risk posed to the public from potential releases of flammable fluids originating from the facility (see Quantitative Risk Analysis for the Finger Lakes LPG Storage Facility [Feb. 16, 2012], OHMS Doc. No. 00003, Doc. List I.B.8 [2012 Quest QRA]). The DSEIS was further supplemented prior to the issues conference by a Quest QRA analyzing the level of risk to the public posed by

transportation of LPG by pipeline, railcar, and tank truck (see Quest Consultants Inc., Quantitative Transportation Risk Analysis for the Finger Lakes LPG Terminal [Feb. 5, 2015], OHMS Doc. No. 00030 [2015 Quest QRA]). Applicant also submitted an affidavit of William Kennedy, Coordinator of Schuyler County Emergency Management, that provides information regarding Schuyler County's plans for responding to uncontrolled releases of LPG in transit or from stationary facilities (see Affidavit of Williams Kennedy [2-6-15], OHMS Doc. No. 00030).

With respect to the hazards and risk associated with facility operations, the 2012 Quest QRA examined the potentials risks associated with common hazards including torch fires (gas and liquefied gas releases), pool fires (liquefied gas and volatile liquid releases), flash fires (gas, liquefied gas, and volatile liquid releases), and vapor cloud explosions (gas, liquefied gas, and volatile liquid releases). The hazards were examined under various scenarios from small releases to catastrophic ruptures of containment vessels. The 2012 QRA concluded that "the hazards and risks associated with the Finger Lakes LPG facility are similar to those from LPG storage, transport and processing facilities worldwide. While the offsite risk associated with the operation of the LPG facility is not zero, the offsite areas impacted by the higher risk levels (1.0×10^{-4} and greater) are limited to a few uninhabited locations, and most offsite areas are found to be exposed to low levels of risk. In addition, this analysis is conservative in nature, so it should provide an overprediction of the true risk imposed by the facility" (2012 Quest QRA at 6-9). The report also noted that the risk beyond about 1,500 feet of any of the facility's components is zero because no fatal impacts could reach that distance (see id.). The report further notes that for comparison, many other causes of death, including agricultural accidents, motor vehicle accidents, falls, and accidental drownings, have similar or higher probability of fatality when compared to the risk of fatality associated with the facility in locations beyond the facility's property lines (see id. at 6-6 to 6-7).

With respect to the hazards and risks associated with the transportation of LPG, the 2015 Quest QRA analyzed the risk and hazards associated with leaks, punctures, major releases, and catastrophic failures or ruptures of pipelines, tank trucks, and rail cars and the fires and explosions associated with those releases. The 2015 QRA concluded that the public risk due to transportation by pipeline and rail car associated with the facility is minimal and should be deemed acceptable (see 2015 Quest QRA at 2). The 2015 QRA also concluded that the public risk due to truck transportation associated with the facility is zero, given the 2014 plan to not use truck transportation (see id.; see also 2014 Transportation Allocation). Even assuming truck transportation was used, the 2015 QRA found the increased incremental risk would be minimal (see id. at 49). For locations further than 1,100 feet from a rail car, 750 feet from a pipeline, or 600 feet away from a tank truck, the risk drops to zero (see id.). When compared to other causes of death, the risk associated with the facility's transportation activities is approximately equal to being struck by lightning if an individual is within about 1,000 feet of a transportation route for an entire year (see id.).

The 2015 Quest QRA specifically addressed the risk associated with a Watkins Glen gorge accident involving the derailment of an LPG rail car off the railroad bridge. The

QRA concludes that such a derailment is extremely unlikely, with a probability of one chance in about 205,000 per year (see id. at 54). If a derailment did occur, the QRA concludes that the consequences are expected to be severe:

“An LPG railcar’s fall into the gorge will likely result in catastrophic failure of a railcar, with immediate ignition of the released contents due to the nature of the event. The outcome is a fireball, similar to the BLEVE [boiling liquid expanding vapor explosions associated with major failures of railcars or truck-trailer tanks] events modeled in the QRA study. In rare events, a railcar could fall into the gorge and fail without ignition. The result would be a flammable gas cloud that slowly travels downhill (following Glen Creek) and is dispersed by wind moving through the gorge as well as by passive dispersion. It is unlikely that a flammable mixture will be able to travel the 1.1 miles from the railroad bridge to the town of Watkins Glen, especially without being ignited. So while hazards in the gorge due to this unlikely event could be severe, there is little risk to the town of Watkins Glen. In addition, this accident is possible today, as there are already LPG railcar movements on the Norfolk-Southern railway over the gorge”

(id. at 54-55).

As previously noted, applicant now proposes to eliminate the project’s rail and truck components (see Finger Lakes LPG Letter [8-8-16], at 2). In response to this proposal, Department staff sought confirmation whether the elimination of truck and rail at the facility would result in the expansion of the nearby TEPPCO pipeline terminal or construction of another truck or rail terminal elsewhere (see Letter, DEC to Chief ALJ [8-22-16], OHMS Doc. No. 00069, at 2). In reply, applicant confirmed that it has no knowledge of any plans to modify the TEPPCO terminal in Watkins Glen or any other part of the TEPPCO pipeline system that terminates in Selkirk, New York (see Finger Lakes LPG Letter [9-12-16], at 5-6). Applicant also confirmed that the elimination of the project’s truck and rail facilities will not result in the construction or expansion of any Crestwood propane terminals elsewhere (see id. at 6).

Several petitioners seek to raise issues concerning the overall safety of the project. In their petition for party status, SLPWA asserts that the DSEIS is insufficient because it fails to provide an adequate analysis of the potential for significant adverse environmental impacts resulting from a failure of storage cavern integrity, whether that failure is catastrophic or on-going. GFS also raises concerns about the risks posed by cavern integrity issues as well as the potential impact of gas storage on the salinity of Seneca Lake. SLPWA and GFS’s arguments regarding cavern integrity and impacts on Seneca Lake are discussed above and do not raise adjudicable issues. For the same reasons, SLPWA and GFS’s arguments regarding cavern integrity and impacts on Seneca Lake do not raise adjudicable issues concerning the sufficiency of the DSEIS.

GFS also argues that applicant’s analysis of the project’s potential impacts on public safety drastically underestimates the risk that project construction and operation would

pose to the surrounding community. In support of its petition, GFS proffers a quantitative risk analysis by D. Rob Mackenzie, MD (see D. Rob Mackenzie, MD, FACHE, Independent High-Level Quantitative Risk Analysis Schuyler County Liquid Petroleum Gas Storage Proposal [Jan. 14, 2015], OHMS Doc. No. 00020, Exh 2 [Mackenzie QRA]). GFS asserts that Dr. Mackenzie's QRA evaluates the risks associated with LPG rail transport, pipeline transmission, and salt cavern storage, and concludes that the project poses an unacceptable risk to the community that cannot be sufficiently mitigated.

Both Department staff and applicant object to the Mackenzie QRA on the ground that Dr. Mackenzie is not qualified to testify as an expert in the areas of LPG storage and transportation risk assessment. Staff and applicant argue that although Dr. Mackenzie may be qualified to provide expert testimony with respect to risk assessment in the health care field, he lacks the necessary knowledge, skill, experience, training or education to qualify him as an expert in the field of LPG storage and transportation risk assessment. I agree.

When evaluating an offer of proof by a petitioner at the issues conference stage of a permit hearing proceeding, the qualifications of a proffered expert witness are examined (see Seneca Meadows, Interim Decision at 4). To qualify as an expert, the witness must possess the requisite skill, training, education, knowledge, or experience from which it can be assumed that the information imparted or the opinion rendered is reliable (see Matter of Bath Petroleum Storage, Inc., ALJ Ruling on Discovery Disputes and Respondent's Motion to Dismiss, June 13, 2005, at 7; see also Mattot v Ward, 48 NY2d 455, 459 [1979]). Although an examination of Dr. Mackenzie's background shows considerable experience and education in the health care field and the assessment of risk in that field, he has no training, education, knowledge or experience in any fields related to safety and risk assessment in the petrochemical industry specifically, or in hazardous materials management generally. Nor does he possess any education or training in engineering or a related scientific or technical field.

GFS argues that Dr. Mackenzie's familiarity with risk assessment in the health care field combined with his study of and reliance on data from experts in the petrochemical industry provides him with sufficient "on-the-job" experience to qualify him as an expert in risk analysis in this proceeding. However, a witness's review of some reports by experts in the field during the one-time preparation of a risk assessment report does not constitute the "long observation and actual experience" required to be qualified as an expert in the relevant field based upon on-the-job training (see Caprara v Chrysler Corp., 52 NY2d 114, 121 [1981]; Meiselman v Crown Hgts. Hosp., 285 NY 389, 398 [1941]; Schechter v 3320 Holding LLC, 64 AD3d 446, 449-450 [1st Dept 2009]). Accordingly, the Mackenzie QRA is insufficient to raise any adjudicable issues concerning applicant's risk assessment. The Mackenzie QRA is accepted, however, as a comment on the DSEIS and may be considered by the final decision maker when making SEQRA findings.

In its response to applicant's proposal to rely entirely on pipelines for the transportation of LPG to and from the facility, GFS contends that applicant has provided no

information about the implications of relying exclusively on pipelines for propane transportation (see Letter, GFS to Chief ALJ [8-22-16], OHMS Doc. No. 00070). GFS raises questions concerning whether the pipelines used for propane delivery to and from the facility require upgrading, expansion, or replacement to accommodate LPG that otherwise would have been transported by truck or rail. Under applicant's prior product transportation allocation, however, 95 percent of propane deliveries to the facility were to be by pipeline and 5 percent by rail (see 2014 Transportation Allocation, OHMS Doc. No. 00003, Doc. List I.B.36). All outgoing propane deliveries were to be delivered to customers by pipeline (see id.). All butane deliveries were to be by rail, and no truck deliveries of LPG were planned (see id.). In analyzing the risks associated with pipeline transportation of propane, the 2015 Quest QRA assumed the 2014 product transportation allocation (see 2015 Quest QRA at 1). GFS makes no offer of proof that the 5 percent increase in the use of pipelines for the delivery of propane to the facility will result in significant impacts different from those associated with the prior product transportation allocation and thereby significantly alter the risk analysis conducted by QRA.

In its petition, SL Communities argues that the DSEIS does not sufficiently address the potential impacts that a spill, accident, or catastrophic event would have on the emergency resources of the localities in the region that would be directly and adversely affected by the project. In support of this issue, SL Communities offers the affidavit and proposed testimony of Richard B. Kuprewicz, president of Accufacts, Inc., a firm that provides consulting services related to hydrocarbon pipeline energy infrastructure (see Affidavit of Richard B. Kuprewicz [1/15/15], OHMS Doc. No. 00022, Attach F [Kuprewicz Affid]). In his affidavit, Mr. Kuprewicz offers to provide testimony that the underground storage of LPG presents a much greater safety risk than risks associated with the aboveground storage of LPG or risks associated with LPG transportation by trucks, railcars, or pipelines. Mr. Kuprewicz also offers to testify that state and local emergency response plans and emergency response personnel are not likely to be able to effectively handle a catastrophic release of stored LPG from the project's salt caverns.

SL Communities fails to raise any adjudicable issue. Mr. Kuprewicz's affidavit fails to provide any factual, technical or scientific foundation for his proffered testimony. Accordingly, the offer of proof is insufficient.

In their petition for full party status, the Schuyler County Legislators also seek to raise public safety issues "due to inadequate identification and mitigation of the risks involved in truck and rail transportation of LPG through the county" (Brief and Petition for Full Party Status by Schuyler County Legislators Van A. Harp and Michael L. Lausell, OHMS Doc. No. 00043, at 4 [Legislators' Petition]).²² In support of their petition, the Legislators offer the Schuyler County Comprehensive Emergency Management Plan approved in April 2015 (see Finger Lakes LPG Post Issues Conference Brief, OHMS Doc. No. 00038, Exh 6 [CEMP]). They also offer their own testimony as legislators who actively participate in administering the business of the county

²² The objection by Department staff and applicant that the Legislators' petition for party status does not satisfy the standards for a late-filed petition is addressed below.

and overseeing the work of the emergency management officer. In addition, one legislator has “extensive experience in risk mitigation and human behavior,” and the other is an attorney (see Legislators’ Petition at 6).

The Schuyler County Legislators have provided insufficient information to establish that they are qualified to provide expert testimony concerning the risk assessment provided in the DSEIS and supplemental submissions. Moreover, the elimination of transportation of LPG by truck or rail car has rendered their proposed testimony academic. Accordingly, the Legislators fail to raise any adjudicable issues, and their brief and petition will be considered comments on the DSEIS.

In sum, petitioners have failed to raise any adjudicable issues concerning the sufficiency of the analysis in the DSEIS and supplemental submissions on the issue of the impacts of the project on public safety. Petitioners’ submissions, however, are accepted into the SEQRA record as comments on the DSEIS and may be considered by the final agency decision maker when making SEQRA findings.

5. Alternatives Analysis

In its petition for party status, SLPWA argues that the DSEIS fails to identify or analyze a reasonable range of alternatives to the project. In its post issues conference brief, SLPWA elaborates that the DEIS fails to include a discussion of the no action alternative or any reasonable alternative to the project other than alternative designs for the brine ponds. SLPWA asserts that the failure to include a discussion of the no action alternative or a discussion of any alternative locations for LPG storage is fatal under SEQRA. Accordingly, SLPWA argues it has raised an adjudicable issue. SLPWA does not, however, proffer an alternatives analysis of its own.

In their petitions and briefing, GFS and SL Communities also argue that the DSEIS fails to include a discussion of the no action alternative or alternative sites for the project. Also, in light of applicant’s 2014 revised product transportation allocation, in which applicant indicated that LPG transportation by truck would be eliminated, GFS argues that the impacts associated with increased use of pipelines and railcars for the transportation of LPG should be examined as an alternative. GFS argues that the lack of alternatives is a legal issue whose resolution is not dependent on facts that are in substantial dispute and, therefore, may be resolved in an issues ruling (see 6 NYCRR 624.4[b][5]).

In their late-filed petition for party status, the Schuyler County Legislators argue that insufficient consideration was given to the Savona gas storage facility, which is located about 20 miles to the southwest of the project site, as an alternative site.

ECL 8-0109 provides that an EIS “shall include a detailed statement setting forth . . . alternatives to the proposed action” (ECL 8-0109[2][d]). The purpose of requiring a

discussion of reasonable alternatives to a proposed project is to aid the agency and the public in assessing the relative costs and benefits of the proposal (see Webster Assocs., 59 NY2d at 228-229). As further elaborated in the SEQR Handbook:

“An EIS has been required because potentially significant adverse impacts of the sponsor’s proposed project have been identified. An analysis of alternative project configurations or designs will enable the lead agency to determine if there are reasonable, feasible alternatives which would allow some or all of the adverse impacts to be avoided while generally satisfying the sponsor’s goals. A project sponsor generally develops its project proposal solely on its own goals and objectives. These goals and objectives may not include maximum protection of environmental factors, and are not always shared by the reviewing agencies or public. Requiring that reasonable alternatives be discussed allows a reviewer to independently determine if the proposed action is, in fact, the best alternative for that project when all environmental factors have been considered”

(SEQR Handbook at 123-124 [2010]).

The SEQRA regulations provide that a draft EIS must include

“a description and evaluation of the range of reasonable alternatives to the action that are feasible, considering the objectives and capabilities of the project sponsor. The description and evaluation of each alternative should be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed. The range of alternatives must include the no action alternative. The no action alternative discussion should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action. The range of alternatives may also include, as appropriate, alternative . . . sites [and] scale or magnitude”

(6 NYCRR 617.9[b][5][v]). The regulations further provide that “[s]ite alternatives may be limited to parcels owned by, or under option to, a private project sponsor” (id.).

The Department’s SEQR Handbook provides further guidance on the no-action alternative analysis:

“The ‘no-action’ alternative must always be discussed to provide a baseline for evaluation of impacts and comparisons of other impacts. The substance of the “no action” discussion should be a description of the likely circumstances at the project site if the project does not proceed. For many private actions, the no action alternative may be simply and adequately addressed by identifying the direct financial effects of not undertaking the action, or by describing the likely future conditions of the property if developed to the maximum allowed under existing zoning”

(SEQR Handbook at 126).

In the final scoping outline, applicant was required to provide an analysis of alternative sites owned by, or under option to, applicant and located in the general project area (see Final Scoping Outline at 9). The outline also required analysis of alternative project sizes (see *id.*). The outline did not expressly indicate that the required no action alternative should be excluded from consideration (see *id.* [11.0 Issues Not To Be Addressed in the DSEIS]).

The DSEIS contains a section on alternatives to the proposed action (see DSEIS § 5.0, at 170). With respect to alternative sites, the DSEIS states that “[g]iven that the solution mining wells already exist, Finger Lakes did not consider other greenfields in the vicinity of the site for an underground storage LPG facility. In addition, given the use of the US Salt property for solution salt mining, underground natural gas storage, and with this application, LPG storage, it was not feasible to locate the surface facility on the US Salt property. Therefore, Finger Lakes acquired property on NYS Route 14A because it is contiguous to property US Salt owns on the west side of NYS Route 14 making the pipeline connection possible without having to acquire any easements from other property owners” (*id.*). The remainder of the section analyzes the various options considered for the location of the brine ponds.

Although Department staff and applicant agree that the no-action alternative is not discussed in the alternatives section in the DSEIS, they nonetheless argue that it is addressed in other sections of the DSEIS and in other submissions that are part of the public record of this case. First, staff indicates that the no-action alternative is discussed in the 1992 GEIS (see e.g. Draft GEIS, Vol 2, at 21-1 [1988]). Second, applicant notes that the existing environmental setting of the project is discussed in various places through the DSEIS and, therefore, the DSEIS provides a description of the likely circumstance at the site of the project if the project does not proceed (citing DSEIS §§ 4.1.1.1, 4.1.2.1, 4.1.3.1, 4.2.1.1, 4.2.2.1, 4.3.1, 4.4.1, 4.5.1, and 4.6.1). Applicant also asserts that the direct financial effects of not undertaking the action are described in the section of the DSEIS that discusses the purpose and need for the proposed action (see DSEIS § 3.3.1). Finally, in a letter sent to the Department and made a part of the public record of this application, applicant provided a further evaluation of the “no-action” alternative (see Letter, BSK to DEC [2-16-12], OHMS Doc. No. 00003, Doc. List I.B.7). Accordingly, DEC staff and applicant contend that the requirement for the discussion of the no-action alternative has been satisfied.

I agree. Petitioners’ argument concerning the lack of an analysis of the no-action alternative is rebutted by materials submitted during staff’s application review and made part of the public SEQRA record. A discussion of the no-action alternative in the alternatives section of the DSEIS would have been clearer and, therefore, the better practice. Nonetheless, the DSEIS as supplemented by the discussion in applicant’s February 16, 2012 letter provides a sufficient baseline description of the present and reasonably foreseeable future conditions at the site to allow for the evaluation and comparison of impacts from the proposed action. To the extent SL Communities asserts that the analysis fails to describe the capability of the project site to improve environmentally, they do not identify any “beneficial site changes that are likely to

occur in the reasonably foreseeable future” that should have been included in the analysis (6 NYCRR 617.9[b][5][v]). Accordingly, petitioners’ assertion that the DSEIS lacks a sufficient description of the no-action alternative is rejected.

With respect to GFS’s assertion that the alternatives analysis is insufficient because it fails to provide an analysis of alternative product transportation allocation scenarios, I disagree. The DSEIS analyzed the impacts from truck traffic and train operations on a per day basis and assumed the maximum number of trucks or railcars each day (see DSEIS § 4.4.2, at 123). The DSEIS did not factor days with less than maximum vehicle traffic into its analysis of impacts. Thus, the DSEIS analyzed the worst-case scenario of maximum vehicle traffic each day for every day of the year.

Under the current transportation allocation, applicant proposes to eliminate all LPG deliveries by truck and railcar. It may be reasonably assumed without further elaboration that any adverse impacts from project-related truck traffic -- which DOT concluded were insignificant in any event -- would be completely eliminated. Similarly with respect to railcar traffic, the elimination of deliveries by railcar would completely eliminate any impacts from rail traffic identified in the DSEIS. Accordingly, any further analysis of alternative product transportation allocation scenarios is not required.

With respect to petitioners’ arguments regarding the lack of an analysis of alternative sites, the arguments are rebutted by Department staff’s review of the application, which, as supplemented by the record of the issues conference, is part of the public SEQRA record. The issues conference record reveals that one alternative site under the control of applicant was considered by Department staff during its review of applicant’s project, namely, the Savona LPG facility located nearby in Steuben County. Moreover, although Department staff rejected the Savona facility as a reasonable alternative to the proposed project, the issues conference record now contains a sufficient description of the Savona facility and the environmental costs and benefits associated with it to allow the final agency decision maker to make a comparative assessment of the two facilities (see e.g. Issues Conference Transcript [IC Trans] at 483-487; DEC Initial Post Issues Conference Brief at 93-95; DEC Post Issues Conference Reply Brief at 13-15). Again, the better practice would have been to include the analysis of the Savona site in the DSEIS. Nonetheless, the alternative site analysis provided in the DSEIS is supplemented by the issues conference record, and adjudication on this point is not required.

With respect to other potential alternative sites in the general project area under the control of applicant, the issues conference record is not clear. When asked at the issues conference whether applicant owned or had options on other facilities in the area of the project, the answer was “30 plus miles away” (IC Trans at 470). Given that applicant’s purpose is to establish a LPG distribution center in depleted salt caverns to service the New York LPG market (see DSEIS §§ 3.3.3 and 3.3.4, at 16-18), a facility under the control of applicant only 30 plus miles away would fall in the general project area and, under the scoping outline, should be

considered. Moreover, inasmuch as the Savona facility is only around 20 miles from the proposed project site, it would appear that a facility 30 plus miles away is not the Savona facility.

Accordingly, to clarify and complete the record on alternative sites, applicant is directed to confirm whether it owns or has options on other sites in New York that contain salt caverns other than the Savona facility and, if so, to provide an alternatives analysis for those sites. The issues conference parties will be afforded the opportunity to comment on any additional alternatives presented by applicant.²³

In sum, subject to the clarification and, if necessary, further development of the record directed above, no adjudicable issues are raised concerning the DSEIS's alternative analysis. The parties' submissions are accepted as comments on the DSEIS and may be considered by the final decision maker when making SEQRA findings.

6. Cumulative Impacts

Another legal issue raised by GFS in its petition concerns the DSEIS's failure to analyze the cumulative impacts of the project. Specifically, GFS notes that in August 2010, FERC authorized Arlington Storage Company, applicant's affiliate, to purchase the property adjacent to the project site to develop the Arlington Gallery 2 natural gas storage facility (see Arlington Storage Co., LLC, 132 FERC ¶ 61,171 [2010]).²⁴ GFS asserts that Department staff was aware of the Arlington Gallery 2 development by April 2011, but did not evaluate whether these two adjacent projects, as well as any other nearby projects, would have significant adverse cumulative environmental impacts. GFS argues that the two projects will have combined impacts on noise, traffic, community character, and public safety that were not considered. Absent a meaningful analysis of cumulative impacts, GFS argues that the Department cannot make a reasoned finding under SEQRA that the project's significant adverse impacts have been minimized or mitigated to the maximum extent practicable. Accordingly, GFS contends that the DSEIS is deficient as a matter of law.

In response, both applicant and Department staff argue that GFS has failed to identify any specific cumulative impacts associated with the two projects, and failed to make an offer of proof concerning the significance of those impacts. In addition, Department staff asserts

²³ Applicant and Department staff object that petitioners have not identified any alternative sites for analysis. However, applicant is clearly in the best position to know the sites in New York it owns or on which it has options.

²⁴ As noted above in footnote 12, press reports indicated that Arlington has abandoned the Arlington Gallery 2 natural gas storage facility project. However, applicant has not provided any formal notice of the abandonment of that project for the record in this proceeding. Accordingly, this ruling assumes that the Arlington Gallery 2 project is still being pursued.

that an evaluation of the significant cumulative impacts of the two projects was undertaken during the permit application review process. Staff notes that in its review of the Arlington Gallery 2 project, FERC conducted an analysis of the potential cumulative impacts of the two projects, including impacts on groundwater, surface-water quality, and air impacts (see May 2014 FERC Certificate Order P 62). FERC found negligible cumulative impacts on groundwater and surface water, and no cumulative impacts on air resources (see id. PP 63, 66, 69). FERC also examined the combined construction and operational impacts of the two projects on traffic, noise, land use, aesthetics, the local economy (primarily tourism), and public health, and concluded that the cumulative impacts would be either minimal or insignificant (see id. PP 64-73).

In addition, Department staff conducted its own inquiry into the potential cumulative impacts of the two projects (see DEC Staff Initial Post Issues Conference Brief at 95-100). During the permit review process, Department staff required applicant to address whether the adjacent projects would result in cumulative subsurface impacts and, based on applicant's response, concluded that no cumulative impacts would occur (see id. at 97-98). Department staff also considered the potential for cumulative traffic, dust, and light impacts and concluded they would not be significant (see id. at 99). Staff further notes that the 2014 Supplemental Hunt Study analyzed the combined noise impacts from the two facilities and concluded that the DEC Noise Policy guidelines would be met (see id. at 100; see also OHMS Doc. No. 00003, Doc. List I.B.32 [2014 Supplemental Hunt Study]).

Under the SEQRA regulations, the reasonably related cumulative impacts should be discussed in a DEIS only where applicable and significant (see 6 NYCRR 617.9[b][5][iii][a']). Cumulative impacts are those environmental impacts that

“result from the incremental or increased impact of an action(s) when the impacts of that action are added to other past, present and reasonably foreseeable actions. Cumulative impacts can result from a single action or a number of individually minor but collectively significant actions taking place over a period of time. Either the impacts of the actions themselves must be related . . . Cumulative impacts must be assessed when actions are proposed to or will foreseeably take place simultaneously or sequentially in a way that their combined impacts may be significant. Assessment of cumulative impacts is limited to consideration of probably impacts, not speculative ones”

(Crossroads Ventures, Interim Decision at 80-81 [quoting SEQRA Handbook at 41 (1992)]).

Here, GFS's argument that an analysis of the cumulative impacts of the Finger Lakes and Arlington Gallery 2 projects was not undertaken is rebutted by Department staff's permit application review. The issues conference record reveals that, in addition to considering the cumulative impacts analysis conducted by FERC on the Arlington Gallery 2 application, Department staff conducted its own independent analysis of the potential cumulative impacts of the two projects and concluded that the impacts would be minimal or insignificant. Again, the

better practice would have been to include the cumulative impacts analysis in the DSEIS. However, Department staff's cumulative impacts analysis is part of the public SEQRA record, as supplemented by the issues conference record. GFS fails to make an offer of proof or otherwise raise an adjudicable issues concerning the sufficiency of staff's analysis as a basis for making SEQRA findings. Accordingly, GFS's legal challenge to the cumulative impacts analysis is rejected.

7. Impacts on Community Character

In its petition, GFS argues that the DSEIS is insufficient because it fails to analyze the project's significant impacts on community character. GFS argues that the facility would cause disruptions to scenic vistas, and increase noise and traffic. GFS also argues that the project will cause significant adverse social and economic impacts to the region's wineries and tourist-related business. GFS asserts that the project will cause significant adverse economic impacts by industrializing the Seneca Lake shoreline and thereby undermine the region's "branding" that is centered on aesthetic values, such as scenic views, prospering wineries and vineyards, culinary arts, heritage sites, and recreational activities such as fishing and boating. GFS contends that the project's potential adverse impacts on community character raise substantive and significant issues that require adjudication. In support of its petition, GFS proffers a community character analysis by Harvey K. Flad, Ph.D. (Flad, Community Character Analysis [Jan. 15, 2015], GFS Petition, Exh 5 [Flad Report]), a report by Susan M. Christopherson, Ph.D. (Christopherson, Sources of Economic Development in the Finger Lakes Region: The Critical Importance of Tourism and Perceptions of Place [Jan. 14, 2015], *id.*, Exh 6 [Christopherson Report]), and the Sandstone Report on noise impacts.

In its petition, SL Communities also proposes community character impacts as issues for adjudication. SL Communities argues that the DSEIS fails to assess the impact of the project and its operational infrastructure on the character and land use planning of the Finger Lakes region. SL Communities contends that the character of the Finger Lakes regions is increasingly returning to its historic identity as a center for viticulture, agri-business, recreation, and tourism due to the efforts of local municipalities. SL Communities asserts that the proposed project is anachronistic and presents a threat to the emerging community character that is purposefully being cultivated by SL Communities and other municipalities in the region. Specific challenges to the DSEIS include: (1) its failure to include communities besides the Town of Reading and the region as whole in its description of the environmental setting of the project; (2) its failure to evaluate the potential significant adverse impacts, including traffic, noise, and aesthetic impacts, on the community character of other likely affected municipalities or the region as a whole; and (3) its insufficient consideration of the potentially significant adverse impacts that potential accidents or a catastrophic event would have on community character. In support of its petition, SL Communities replies on the Flad Report, Christopherson Report, Clark Report, and Mackenzie Report attached to GFS's petition. SL Communities also

offers letters from winery owners, affidavits of various municipal officials, and the Kuprewicz affidavit (see SL Communities Petition, OHMS Doc. No. 00022, Attachments A-F).

In its petition for amicus status, FLXWBC proposes to brief legal and policy issues regarding the impacts of the project's "heavy industrial use" on the community character of the localities surrounding the project site, the Finger Lakes region in general, and the Finger Lakes Wine Country in particular (FLXWC Petition for Amicus Status, OHMS Doc. No. 00023, at 14).

In response, Department staff asserts that petitioners have not presented facts sufficient to establish that impacts to community character should be adjudicated as a separate issue. Instead, staff indicates that the arguments presented by petitioners should be treated as comments on the DSEIS and specifically addressed in the response to comments and SEQRA findings.

In its response, applicant argues that community character cannot be adjudicated in a Part 624 permit hearing proceeding. Moreover, applicant argues that the local land use plans of the host communities are controlling and demonstrate that the project is consistent with the community character of those communities. Applicant urges that an evaluation of the project's consistency with community character should be based primarily on the land use plan in the Town of Reading, and not regional land use plans from remote non-host communities.

As an initial matter, applicant's argument that impacts on community character cannot be adjudicated as a separate issue in a Part 624 proceeding is overstated. Impacts on existing community character are a proper consideration under SEQRA (see ECL 8-0105[6] [including "existing community or neighborhood character" in the definition of "environment"]; see also Chinese Staff and Workers Assn. v City of New York, 68 NY2d 359 [1986]). Moreover, the Department has separately adjudicated community character impacts through a Part 624 proceeding (see e.g. Matter of Palumbo Block Co., Interim Decision of the Commissioner, June 4, 2001). Although the Department did not separately adjudicate community character impacts in several recent cases, it does not necessarily follow that community character impacts may not be adjudicated as a separate issue in the appropriate case and based upon a sufficient offer of proof. Nothing in the recent cases cited by applicant support such a conclusion.

In addition, although the Department generally looks to local zoning and land use plans as an indication of a locality's view of its community character, in the appropriate case, the Department has taken a broader view of the relevant community to include the larger community and even the region within the scope of the community under consideration. This is particularly the case when the larger region has features and values of regional, if not State-wide, significance (see e.g. St. Lawrence Cement, Second Interim Decision at 118-119, 122 [including portions of the Hudson Valley region in the scope of the relevant community]).

In this case, however, I conclude that it is not necessary to adjudicate community character as a separate issue. The parties do not dispute that the larger community includes a burgeoning wine and tourism industry. Nor do the parties dispute that the Finger Lakes Wine Country is of particular regional and State-wide significance. Indeed, several references in the DSEIS include references to the existence of wineries and other tourist attractions, and their economic importance. Accordingly, it is not necessary to conduct an adjudication to settle factual disputes about the regional community's character.

Instead, as recommended by Department staff, petitioners' submissions and arguments are accepted into SEQRA record as comments on the DSEIS to supplement the record on the character of the existing community in the area of the proposed project, and on the potential impacts the project may have on that character. The final agency decision maker will consider those submissions and the responses thereto when making SEQRA findings on the project.

8. Indemnification Clause

The draft permit contains the following Condition 9:

“The Permittee expressly accepts the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the storage facility's construction and operation to the extent such liability is attributable to the actions of the Permittee, its employees, agents, contractors or subcontractors, and to the extent the Permittee is liable under law for such actions. The Permittee must indemnify and save harmless the State from suits, actions, damages, and costs of every nature and description resulting from such actions.”

(Updated Draft Permit Condition 9.)

In its petition for party status, SL Communities argues that Condition 9 fails to provide indemnity or insurance to protect SL Communities in the event of a catastrophic event and, therefore, fails to provide adequate mitigation of the potential impacts from the project. First, SL Communities asserts that Condition 9 is ambiguous and should be clarified. In addition, SL Communities contends that in the event of a catastrophic explosion or release of salt into Seneca Lake that impacts water quality, Condition 9 must include financial assurance that would cover the municipalities' response costs, including the costs of replacing or supplementing water treatment systems. In briefing, SL Communities argues that the financial assurance may be imposed by the Department pursuant to both ECL article 23 and SEQRA. They also offer the affidavits of Mathew Horn, city manager of the City of Geneva, and Richard Kuprewicz in support of their arguments (see SL Communities Petition, OHMS Doc. No. 00022, Attachments F and G).

In its petition for amicus status, FLXWBC echoes SL Communities' arguments.

In response, Department staff argues that petitioners' request for the Department to impose a bond, indemnity or insurance requirement to protect communities in the event of an accident is not practicable and not reasonably related to impacts identified in the DSEIS. Accordingly, staff contends that no basis exists for requiring a surety. Moreover, staff asserts the issue is an economic one and, therefore, not adjudicable.

In its response, applicant asserts that nothing in ECL article 23 requires the posting of a bond as a condition for obtaining an underground storage of gas permit. Moreover, applicant contends that petitioners' objections to Condition 9 are purely economic and, thus, beyond the scope of SEQRA and not adjudicable.

As an initial matter, Condition 9 is not ambiguous and in need of clarification. Condition 9 is a standard hold-harmless condition that expressly provides that, by issuing a permit, the Department is not assuming any liabilities for applicant's actions under the permit. Condition 9 is imposed to clarify the respective legal liabilities of the Department and the permittee, and is not intended as an environmental mitigation measure. Inasmuch as the draft permit does not involve any approvals by the municipalities, no basis exists for extending the hold-harmless condition to cover the municipalities on that ground.

To the extent petitioners seek imposition of a bonding or insurance requirement as an environmental mitigation measure, applicant is correct that ECL article 23 does not expressly require the posting of a bond as a condition for obtaining an underground storage of gas permit (cf. e.g. ECL 23-0305[8][e], [k]; ECL 23-0305[14][f]; ECL 23-1101[3][e]). However, the Department has the authority under SEQRA to impose substantive conditions upon an action to ensure that environmental impacts will be avoided or minimized to the maximum extent practicable (see 6 NYCRR 617.3[b]; 6 NYCRR 617.11[d][5]). Any such condition must be reasonable in scope and reasonably related to an adverse impact identified in the EIS (see Matter of Town of Henrietta v Department of Env'tl. Conservation, 76 AD2d 215, 226-227 [4th Dept 1980]).

At this stage of the proceedings and SEQRA review, it is not necessary to adjudicate whether a bond or insurance requirement is required to address potential impacts from explosions or to water quality as a result of a catastrophic accident at the facility. Whether to impose such a requirement will first depend upon whether the final agency decision maker determines that significant unmitigated impacts in this regard remain. If so, the final decision maker may make a determination whether the condition requested is practicable and reasonably related to mitigating those impacts.

Contrary to applicant's assertion, the requested condition cannot be categorically rejected as addressing a purely economic issue beyond SEQRA's scope. The fact that implementation of a SEQRA condition might have costs associated with it does not necessarily

mean that the condition addresses a purely economic issue. If the final decision maker were to conclude that the adverse impacts from a catastrophic event at a facility are not sufficiently mitigated by measures incorporated in the DSEIS and the draft permit, the decision maker could reasonably conclude that a financial assurance is necessary to address those impacts in the event they occur.

In sum, petitioners have not raised an adjudicable issue regarding Condition 9. The final decision maker may consider whether to impose the requested bonding or insurance requirement when making SEQRA findings on the project.

IV. RULINGS ON PARTY STATUS PETITIONS

A. Full-Party Status Petitions

Pursuant to 6 NYCRR 624.5(a), applicant and Department staff are automatically full parties to the proceeding.

With respect to full-party status petitioners SLPWA, GFS, and SL Communities, the determination whether to grant a petitioner full party status is based upon:

(1) a finding that the petitioner has filed an acceptable petition pursuant to 6 NYCRR 624.5(b)(1) and (2);

(2) a finding that petitioner has raised a substantive and significant issue or that the petitioner can make a meaningful contribution to the record regarding a substantive and significant issue raised by another party; and

(3) a demonstration of an adequate environmental interest

(see 6 NYCRR 624.5[d][1]).

I conclude that SLPWA, GFS, and SL Communities have each filed acceptable petitions pursuant to 6 NYCRR 624.5(b)(1) and (2), and have each demonstrated an adequate environmental interest. As concluded above, petitioners have not raised a substantive and significant issue requiring adjudication under either ECL article 23, title 13 or SEQRA. However, the SEQRA record remains open for clarification regarding applicant's ownership or control of alternative sites and, potentially, further development of the SEQRA record on those sites, if any (see Section III.B.5 above). Accordingly, I reserve decision on the party status of SLPWA, GFS, and SL Communities until the SEQRA record on alternative sites is completed.

With respect to the two Schuylers County Legislators' late-filed petition for full party status, in addition to satisfying the requirements of section 624.5(d)(1), petitioners must also: (1) demonstrate good cause for the late filing; (2) demonstrate that petitioners' participation

will not significantly delay the proceeding or unreasonably prejudice the other parties; and (3) demonstrate that petitioners' participation will materially assist in the determination of issues raised in the proceeding (see 6 NYCRR 624.5[c][2]).

The Legislators have filed an acceptable petition, and have demonstrated an adequate environmental interest. In addition, consideration of the Legislators' late filed petition has not significantly delayed the proceeding or unreasonably prejudiced the other parties' ability to respond. However, as concluded above, the Legislators have failed to raise a substantive and significant issue requiring adjudication under either ECL article 23, title 13 or SEQRA.

Moreover, the Legislators have not demonstrated good cause for the late filing. In support of their late petition, the Legislators rely on Schuyler County's approval of a revised Comprehensive Emergency Management Plan (CEMP) on April 13, 2015 as "new information" not available at the time of the issues conference (see 6 NYCRR 624.4[b][1]). However, in support of their timely filed petition for amicus status in this proceeding, the Legislators' relied on a draft appendix to the CEMP addressing transportation of LPG (see OHMS Doc. No. 00024, Exh B). The Legislators do not identify the revisions, if any, that were made to the draft appendix upon its adoption, or explain how any revisions provided good cause for not filing a timely petition for full party status. Nor do they provide any good cause for their delay in raising issues concerning the DSEIS's alternative sites analysis. Accordingly, the Legislators have not made the required showing of good cause and their late-filed petition for full-party status is denied. As noted above and following, however, the submissions of the Legislators are accepted as comments on the DSEIS.

B. Amicus-Party Status Petitions

Several parties, including the two Schuyler County Legislators, have filed timely petitions for amicus status. The determination whether to grant a petitioner amicus status is based upon:

(1) a finding that the petitioner has filed an acceptable petition pursuant to 6 NYCRR 624.5(b)(1) and (3);

(2) a finding that the petitioner has identified a legal or policy issue which needs to be resolved by the hearing; and

(3) a finding that the petitioner has a sufficient interest in the resolution of such issue and through expertise, special knowledge or unique perspective may contribute materially to the record on such issue

(see 6 NYCRR 624.5[d][2]).

With respect to the amicus petitions of NPGA, NYPGA, PGANE, and USW (Industry Petitioners), GFS argues that petitioners have not identified any adjudicable issues and, therefore, their petitions should be denied (citing 6 NYCRR 624.5[b][3][i] and 624.4[c]). However, the petitions and other submissions of all amicus petitioners, including Industry Petitioners, FLXWBC, and the Legislators, are comments on the DSEIS and relevant to the SEQRA findings the Department may make. Accordingly, all petitioners have identified issues that need to be resolved in this proceeding.

In addition, all petitioners have filed acceptable petitions, and each petitioner has demonstrated sufficient interest and expertise, special knowledge, or unique perspective to contribute materially to the record on the issues. Accordingly, the amicus petitions are granted, and the petitions and other submission are accepted as filed into the SEQRA record as comments on the DSEIS.

V. SUMMARY OF RULINGS

A. The issues conference record is being reopened for clarification and possible further record development on the issue of possible alternative project sites (see Section II.B.5 above). Applicant shall have until close of business, Friday, September 22, 2017, to confirm whether it owns or has options on other sites in New York that contain salt caverns other than the Savona facility and, if so, to provide an alternatives analysis for those sites. Department staff, SLPWA, GFS, and SL Communities have until close of business, Friday, October 6, 2017, to respond to applicant's filing.

B. Other than the issue of alternative sites, which remains open, petitioners have failed to raise any issues under ECL article 23 or SEQRA requiring adjudication. Petitioners' filings are accepted as filed, however, as comments on the DSEIS and may be considered by the final agency decision maker when making SEQRA findings.

C. Schuyler County Legislators Harp and Lausell's late-filed petition for full party status is denied.

D. SLPWA's July 26, 2016 application to supplement its party status petition is denied.

E. The amicus party status petitions are granted, and the amicus parties' submissions are accepted as filed.

F. Department staff shall have until close of business, Friday, September 22, 2017, to issue to the service list a further revised draft permit containing conditions consistent with this ruling.

VI. APPEALS

Pursuant to 6 NYCRR 624.8(d)(2), a ruling to include or exclude any issue for adjudication, a ruling on the merits of any legal issue made as part of an issues ruling, and a ruling affecting party status are appealable to the Commissioner as of right. Although the regulations provide that appeals must be filed in writing within five days of the disputed ruling (see 6 NYCRR 624.6[e][1]), the period for filing appeals is hereby extended. Any appeals are due by 4:00 PM on Friday, October 20, 2017. Replies are authorized and are due by 4:00 PM on Friday, November 17, 2017.

The original and two copies of each appeal and reply thereto must be filed with Commissioner Basil Seggos (Attention: Louis A. Alexander, Assistant Commissioner for Hearings and Mediation Services), at the New York State Department of Environmental Conservation, 625 Broadway (14th Floor), Albany, New York 12233-1010. In addition, one copy of each submittal must be sent to the undersigned, Department staff and applicant at the same time and in the same manner as the submittals are sent to the Commissioner. Service of papers on the Commissioner, Department staff, applicant and the undersigned by electronic mail is permitted provided conforming hard copies are sent by regular mail and post marked by the due date. Service of papers by facsimile transmission (FAX) is not permitted, and any such service will not be accepted.

All papers shall be served upon the remaining parties on the service list by methods agreed to by the parties.

_____/s/
James T. McClymonds
Chief Administrative Law Judge

Dated: September 8, 2017
Albany, New York

Attachment: Issues Conference Exhibit List and Document List

Cc: Louis A. Alexander, Assistant Commissioner for Hearings and Mediation Services

To: Attached Service List