NYSDEC OHMS Document No. 201166576-00038

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of Application of Finger Lakes LPG Storage, LLC

Application No. 8-4432-00085

FINGER LAKES LPG STORAGE, LLC'S
POST-ISSUES CONFERENCE BRIEF

Kevin M. Bernstein
BOND, SCHOENECK & KING, PLLC
One Lincoln Center
Syracuse, New York 13202
(315) 218-8329

Robert J. Alessi
DLA PIPER LLP (U.S.)
677 Broadway – Suite 1205
Albany, New York 12207
(518) 788-9708

NYSDEC OHMS Document No. 201166576-00038

Table of Contents

Page

I. Introduction 1

II. Standard for Adjudication 2

III. There is No Basis to Adjudicate the Project's Impact on Community Character 5

A. Community Character Cannot Be Adjudicated as a Separate Issue 6

B. The Controlling Local Land Use Plans of the Host Communities Demonstrate that the Project is Consistent with Community Character – And Petitioners' Arguments to the Contrary are Baseless 16

C. 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 23

IV. The Analysis of Alternatives in the DSEIS Complies with the Requirements of SEQRA 26

A. The DSEIS Satisfies the Requirements of a No Action Discussion 27

B. The Analysis of Alternatives in the DSEIS Complies with the Requirements of the Final Scoping Outline and SEQRA 30

V. The DSEIS Was Not Required to Analyze the Project's Purported Cumulative Impacts 41

A. Petitioner Has Not Alleged – and Cannot Show – that the Environmental Impacts of the Project and the Arlington Facility Will Accumulate to Have a Significant Effect on a Common Resource 41

B. The Final Scoping Outline Did Not Require the DSEIS for the Project Include a Cumulative Impacts Assessment 45

C. FERC and the Department Correctly Concluded that the Project and the Arlington Facility Would Not Result in Any Significant Cumulative Impacts 46

VI. Petitioners' Objections to the Indemnification Provisions of Draft Permit Condition 9 Cannot be Adjudicated 48

A. Condition 9 Does Not Violate Any Statutory or Regulatory Provision, and There is No Statutory or Legal Basis of Imposing a Bonding Requirement to Obtain an Underground Storage Permit 49

B. Petitioners' Arguments that Condition 9 Fails to Offer Adequate Economic Protections Are Predicated on a Hypothetical Catastrophic

NYSDEC OHMS Document No. 201166576-00038

Event Resulting in Speculative Economic Impacts, Which Are Beyond the Scope of SEQRA and Not Adjudicable 51

C. Petitioners' Claimed "Unmitigated" Environmental Impacts Resulting from the Allegedly Inadequate Protection Afforded by Condition 9 are Ultimately Economic in Nature and Thus Beyond the Scope of SEQRA and Not Adjudicable 52

VII. The Record Demonstrates that the Proposed Caverns Have Integrity and There is No Adjudicable Issue 54

A. Introduction 54

B. The Application and the Geologic Evaluation Conducted Demonstrates Cavern Integrity 55

C. FERC Evaluated the Same Geology and Cavern Integrity Issues and Concluded that the Arlington Galleries can Operate Safely and Will Not Impact Seneca Lake – the Same Conclusions Apply Equally to the Finger Lakes LPG Storage Galleries 59

D. Department Staff Completely Rebutted Petitioners' Argument 64

E. Petitioners' Arguments are Without a Scientific Foundation, are Meritless, and Should be Disregarded 66

F. Petitioners Have Not and Cannot Demonstrate Any Connection Between the Salt Caverns and Seneca Lake 78

G. Conclusion 84

VIII. Safety 85

A. Risk Assessment 88

B. Safety References in the DSEIS 96

C. Emergency Preparedness 98

D. Rail Safety 103

IX. Noise 109

A. The Department's Noise Policy and SEQRA 109

B. Other Relevant Noise Standards 113

C. Hunt's Noise Studies 114

D. Construction Noise 117

E. Gas Free Seneca's Noise Report is Flawed and is Not Reliable 118

X. Conclusion 122

NYSDEC OHMS Document No. 201166576-00038

I. Introduction

Pursuant to the schedule established in Chief Administrative Law Judge McClymond's memorandum of March 12, 2015, Finger Lakes LPG Storage, LLC ("Finger Lakes LPG Storage" or the "Applicant") submits this Post-Issues Conference Brief in connection with the issues conference held on February 12 and 13, 2015. Finger Lakes LPG Storage has applied for a permit to construct and operate a new liquefied petroleum gas ("LPG") storage facility for the storage and distribution of propane and butane on a portion of a 576-acre parcel in the Town of Reading, Schuyler County (the "Project"). Petitions for Full Party Status were submitted by Gas Free Seneca, Seneca Lake Pure Waters Association ("SLPWA"), and Seneca Lake Communities. Petitions for Amicus Party status were submitted by Schuyler County Legislators Harp and Lausell ("Harp and Lausell"),[1] the Finger Lakes Wine Business Coalition ("FLXWBC" or "Wine Business Coalition"), New York Propane Gas Association ("NYPGA"), National Propane Gas Association ("NPGA"), Propane Gas Association of New England ("PGANE"), and the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union ("USW"). Based on the contents of the petitions for party status, the application and related documents, the draft permit, the written submittals presented by the Applicant, the issues conference proceedings, and this Post-Issues Conference Brief, petitioners have failed to raise any issues for adjudication. As conditioned in the draft permit, the Applicant has shown that it will meet the statutory and regulatory criteria applicable to the Project and that therefore there are no adjudicable issues and the permit for the Project should be issued.

[1] At the issues conference and in their petition, Harp and Lausell failed to make clear that they were not representing the County or the County Legislature.

NYSDEC OHMS Document No. 201166576-00038

II. Standard for Adjudication

The standard for adjudication and recent Commissioner precedent construing it are especially important for the Finger Lakes LPG Storage application. Because of the dispute over the standard and precedent at the issues conference, and because both frame the analysis of many of the various contentions of the potential parties herein, they are discussed in detail as a threshold matter.

In situations where, as here, "Department staff has reviewed an application and finds that the applicant's project conforms to all applicable statutory and regulatory requirements, the burden of persuasion is on the potential party proposing an issue [for adjudication] to demonstrate that the issue is both substantive and significant." Buffalo Crushed Stone, Inc., Decision of the Commissioner, 2008 N.Y. ENV LEXIS 69, at *10-11 (NYSDEC 2008) (citing 6 NYCRR § 624.4(c)(4)). "An issue is substantive 'if there is 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.'" Id. at *11 (quoting 6 NYCRR § 624.4(c)(2)). "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.'" Id. (quoting 6 NYCRR § 624.4(c)(3)).

"The issues conference, by regulation, has certain identified purposes: (i) to hear argument on whether party status should be granted to any petitioner; (ii) to narrow or resolve disputed issues of fact without resort to taking testimony; (iii) to hear argument on whether disputed issues of fact that are not resolved meet the standards for adjudicable issues; (iv) to determine whether legal issues exist whose resolution is not dependent on facts that are in substantial dispute; and (v) to hear argument on the merits of those issues, and to decide any pending motions." Crossroads Ventures, LLC, Interim Decision of the Deputy Commissioner,

2006 N.Y. ENV LEXIS 88, at *11 (NYSDEC 2006) (citing 6 NYCRR § 624.4(b)(2)) (emphasis added).

A potential party's burden of persuasion at an issues conference to demonstrate that a proposed issue is substantive and significant and thus adjudicable must be met by an appropriate offer of proof. Buffalo Crushed Stone, 2008 N.Y ENV LEXIS 69, at *10. "Although a potential party is not required to present proof of its allegations sufficient to prevail on the merits" during the issues conference, "conclusory or speculative statements without a factual foundation are not sufficient to raise an adjudicable issue." Id. at *12. "Conducting an adjudicatory hearing 'where "offers of proof, at best, raise potential uncertainties" or where a hearing "would dissolve into an academic debate" is not the intent of the Department's hearing process.'" Id. Accordingly, a potential party will not satisfy its prima facie burden to raise a substantive and significant/adjudicable issue if the assertions in its petition lack a factual or scientific foundation. Id. at *14. Notably, "it is not the purpose of post-issues conference briefing to allow a party to supplement, expand upon or otherwise remedy a deficient petition for party status" that fails to meet this prima facie burden. Crossroads Ventures, LLC, 2006 N.Y. ENV LEXIS 88, at *10; Buffalo Crushed Stone, 2008 N.Y. ENV LEXIS 69, at *14 (a "potential parties' offer of proof should be based upon the opinions of experts or other qualified witnesses already identified" prior to the issues conference).

Even if a potential party satisfies its initial prima facie burden by asserting a factual or scientific foundation for its assertions, those assertions can be rebutted by the applicant or Department Staff: "With respect to the proof offered by a potential party, even where supported by a factual or scientific foundation, such offer of proof may be rebutted by the application, the draft permit and proposed conditions, Department staff's analysis, the SEQRA documents, the

record of the issues conference, and authorized briefs, among other relevant materials and arguments." Entergy Nuclear Indian Point 2, LLC and Energy Nuclear Indian Point, LLC, Interim Decision of the Assistant Commissioner, 2008 N.Y. ENV LEXIS 52, at *14 (NYSDEC 2008) (emphasis added). "In areas of Department staff's expertise, its evaluation is an important consideration in determining whether an issue is adjudicable." Id. Importantly, "[t]hat a consultant or expert for a potential party takes a position opposite to that of the applicant or Department staff does not of itself raise an issue. Otherwise, every issue on which differing views are expressed would be adjudicable and the issues conference would not fulfill its function of limiting and defining, as appropriate, the subject matter of the adjudicatory hearing." Crossroads Ventures, LLC, 2006 N.Y. ENV LEXIS 88, at *10 (internal citations omitted).

Under this standard and method directed by recent Commissioner precedent, which springs from and is entirely consistent with the Department's Part 624 permit hearing regulations, a potential party must clearly do much more than simply raise an issue of fact for that issue to be found substantive and significant and therefore adjudicable; otherwise one of the express purposes of the issues conference set forth in Part 624 – "to narrow or resolve disputed issue of fact" – would have no meaning. See 6 NYCRR § 624.4(b)(2)(ii). As the Commissioner precedent makes clear, disputed issues of fact are resolved at the issues conference by examining whether a potential party has satisfied its initial prima facie burden to provide a factual and scientific foundation for its assertions, and then evaluating if any assertions that actually have some factual/scientific foundation have been effectively rebutted "by the application, the draft permit and proposed conditions, Department staff's analysis, the SEQRA documents, the record of the issues conference, and authorized briefs, among other relevant materials and arguments." Entergy Nuclear, 2008 N.Y. ENV LEXIS 52, at *14.

NYSDEC OHMS Document No. 201166576-00038

III. There is No Basis to Adjudicate the Project's Impact on Community Character

Several petitioners offer as an issue for adjudication the DSEIS's alleged insufficient analysis of the Project's impacts on regional "community character." Most specifically, petitioners allege that the Project's "industrialization" of the Finger Lakes, resulting harm to regional wine tourism, and general inconsistency with purported regional development trends have not been adequately analyzed in the DSEIS. During the issues conference, Gas Free Seneca characterized the Project's impacts on community character as the issue of "greatest concern." (Transcript ["Tr."] at 18). The primacy that petitioners place on the community character issue is notable because petitioners' community character arguments are legally and factually devoid of merit in multiple respects.

As discussed at length in Finger Lakes LPG Storage's Response to Party Status Petitions (filed February 9, 2015), petitioners' community character arguments are largely comprised of subjective, nebulous, and unverifiable assertions regarding the Project's alleged inconsistency with a regional "sense of place," or the Project's potential contribution to a disturbing psychological "perception" that "industrialization" is occurring in the bucolic Finger Lakes region.[2] And petitioners did no better with their assertions at the issues conference. Not only are these scenarios fantastically speculative and baseless, it is clear that petitioners are attempting to use analysis of the Project's community character impacts as a mechanism to veto local land use policies with which they disagree – in clear violation of home rule, Department policy, and Commissioner precedent. See, e.g., Wallach v. Town of Dryden, 23 N.Y.3d 728, 742-743

[2] In its Response to Party Status petitions, Finger Lakes LPG Storage argued, among other things: (1) petitioners' offers of proof and substantive contentions regarding the Project's alleged adverse environmental impacts on community character are baseless and do not raise an adjudicable issue; (2) petitioners' assertions regarding the Project's economic impacts are factually incorrect and not cognizable under SEQRA; and (3) analysis of the Project's impacts on community character was not required under the Final Scoping Outline. These and the other arguments asserted in Finger Lakes LPG Storage's Response to Party Status petitions are incorporated herein by reference.

(2014) (citing "home rule" provision of the New York Constitution and Municipal Home Rule Law in support of "fundamental precept" that "local regulation of land use is 'among the most important powers and duties granted … to a town government'"). The Commissioner has not only rightfully and repeatedly rejected substantially identical arguments when raised in the context of reviewing previous projects, but the Commissioner precedent is clear that community character does not represent a separately adjudicable issue.

A. Community Character Cannot Be Adjudicated as a Separate Issue

In Section III.A of its Response to Party Status Petitions, Finger Lakes LPG Storage demonstrated that under well-established Commissioner precedent, the Project's consistency with community character cannot be adjudicated as a separate issue. During the issues conference, petitioners argued that community character could be separately adjudicated. (Tr. at 18, 27-29, 94, 97.) Petitioners are incorrect. It is well established by multiple Commissioner's decisions that the Project's consistency with community character is not adjudicable as a separate issue. See Red Wing Properties, Inc., Interim Decision of the Commissioner, 2010 N.Y ENV LEXIS 31, at *15-18 (NYSDEC 2010); Crossroads Ventures, LLC, Interim Decision of the Deputy Commissioner, 2006 N.Y. ENV LEXIS 88, at *77-78 (NYSDEC 2006); St. Lawrence Cement Co., LLC, Second Interim Decision of the Commissioner, 2004 N.Y. ENV LEXIS 60, at *136-139 (NYSDEC 2004).

The Commissioner's decision in St. Lawrence Cement is instructive and squarely on point. 2004 N.Y. ENV LEXIS 60, at *136-139. The petitioners in St. Lawrence Cement argued that the DEIS for a proposed cement manufacturing facility was insufficient because it failed to adequately evaluate the impact the project would have on community character. Id. at *118-119. In rejecting community character as a separately adjudicable issue, the ALJ's Issues Ruling held that "any impacts to community character will be adequately addressed in conjunction with other

NYSDEC OHMS Document No. 201166576-00038

identified environmental impacts (for example, visual and air pollution)." Id. at *134. The ALJ also rejected the argument that "consideration of this project's impacts on community character must include an assessment of those impacts on the region as a whole (i.e., the Hudson Valley);" instead, the ALJ ruled that analysis of community character should be limited to the host municipalities and one adjacent village. Id. at *134-135.

In appealing the ALJ's ruling rejecting community character as a separately adjudicable issue, the petitioners in St. Lawrence Cement raised arguments remarkably similar to those presented here:

> On appeal, [petitioner] HVPC argues that the ALJs improperly excluded from adjudication cumulative and indirect, secondary community character impacts that will result from the project, including impacts upon tourism, recreation, historic resources, economic development other than industrial development, and second-home ownership in the region. HVPC argues that the [cement manufacturing facility] will intensify industrialization in an area where tourism, recreation, historic resources, and second home ownership have become the predominant economic elements. According to HVPC, [the cement manufacturing facility] will degrade the qualities sought to be protected by the various regional, state and national designations that have been given to the Hudson Valley region. In their joint appeal, proposed amici Preservation League of New York State and the National Trust for Historic Preservation join in HVPC's argument that the ALJs erred in concluding that impacts upon regional "Heritage Tourism" are not adjudicable as an impact upon community character.

Id. at *135-136. The Commissioner in St. Lawrence Cement rejected these arguments and affirmed the ALJ's ruling that the alleged inadequacy of the DEIS's analysis of the cement manufacturing facility's impact on community character was not a separately adjudicable issue.

After noting that the definition of "environment" under SEQRA includes "existing community and neighborhood character," the Commissioner in St. Lawrence Cement held that the "Department, to a large extent, relies on local land use plans as the standard for community character" because "adopted local plans are afforded deference in ascertaining whether a project is consistent with community character." Id. at *136-137 (citing ECL § 8-0105(6); 6 NYCRR

NYSDEC OHMS Document No. 201166576-00038

§ 617.2(l)); Crossroads Ventures, , 2006 N.Y. ENV LEXIS 88, at *77. While "local land use plans are not the only evidence of community character where" a "project may have impacts on resources with recognized designated historic and cultural importance," in instances where "environmental considerations" may be "components" of community character, the "impacts on community character are often intertwined with other environmental issues and can be addressed in the context of those specific issues." St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *137-138. The Commissioner thus held that the adjudication of visual impacts and air quality impacts in the St. Lawrence Cement proceeding would address environmental concerns the petitioners raised with respect to community character. Id. at *139.

The Commissioner in St. Lawrence Cement next addressed petitioners' proposal to adjudicate the facility's impact on regional community character in the context of "the Hudson Valley's trend away from industrial uses, and towards greater reliance on recreation, tourism, historic resources, and second-home ownership." Id. at *140. The Commissioner concluded that an evaluation of the cement manufacturing facility's consistency with the development trends asserted by the petitioners was so inherently subjective as to defy adjudication: "The parties' positions amount to differences of opinion about which particular community values and trends deserve protection." Id. at *141. The Commissioner instead held that inclusion in the SEQRA record of the parties' submissions on the purported development trends, as opposed to adjudicating them in a Part 624 hearing, would provide an adequate basis for the Department's eventual conclusions regarding the cement manufacturing facility's impact on community character:

> To the extent that there may be differing perspectives on these trends, these viewpoints have been expressed in the legislative hearing and in the public comments on the DEIS, which the Department must consider in the preparation of the FEIS and its SEQRA findings…. The DEIS, together with the public

> comment process, provide sufficient information to allow the decision maker to evaluate these trends and the project's consistency with them, and reach the determinations necessary to make SEQRA findings.

Id. at *141; see, e.g., Dudley Road Ass'n v. Adirondack Park Agency, 214 A.D.2d 274, 280 (3d Dep't 1995) ("…the various comments received by APA also provide sufficient basis in the record regarding the social, economic and other important considerations to enable the agency to take the required 'hard look.'").

The Commissioner's decision in St. Lawrence Cement also rejected the contention that "impacts on the entire Hudson Valley" must be evaluated in analyzing community character impacts. 2004 N.Y ENV LEXIS 60, at *144.

The holding in St. Lawrence Cement that community character is not a separately adjudicable issue was confirmed two years later by the Deputy Commissioner's 2006 decision in Crossroads Ventures. 2006 N.Y ENV LEXIS 88, at *78-79. Following a robust issues conference regarding a proposed resort in the Catskills, the ALJ issued a Ruling on Issues and Party Status dated September 7, 2005, that identified 12 issues for adjudication, including the resort's impact on community character. Crossroads Ventures, LLC, Ruling on Issues and Party Status, 2005 N.Y. ENV LEXIS 53 (NYSDEC 2005). Although the proposed resort was consistent with the host communities' local zoning laws, opposing petitioners argued that community character should be adjudicated because "a project of the magnitude proposed will have regional impacts beyond those that can be controlled though zoning regulations." Id. at *218-219. On appeal, the Deputy Commissioner relied on St. Lawrence Cement and overturned the ALJ's decision that community character was a separately adjudicable issue in Crossroads Ventures. 2006 N.Y. ENV LEXIS 88, at *78-79.

NYSDEC OHMS Document No. 201166576-00038

After reiterating that the Department largely relies on "local land use plans as the standard for community character," the Deputy Commissioner's decision in Crossroads Ventures made it clear that the rule that community character cannot be separately adjudicated is based on a general and "long-standing principle" and not an issue that is decided on an ad hoc or case-by-case basis:

> Impacts on community character are often intertwined with other environmental issues and can be addressed in the context of those specific issues. In fact, community character is not readily susceptible to adjudication as a separate issue but rather is considered after the record is developed on particular environmental issues which are aspects of the overall community character. The long-standing principle of deference to local plans, and the focusing of adjudication on discrete environmental issues rather than a general issue of "community character," were most recently affirmed by Commissioner Crotty [in St. Lawrence Cement].

Id. at *77-78. Notably, the Deputy Commissioner also held that the "existing record" – which included "the DEIS, the public comments received, the *issues conference record*… and local and regional plans and location zoning ordinances – "provides sufficient information to evaluate the project's consistency with community character for purposes of the Department's SEQRA review." Id at *78-79 (emphasis added). (As discussed below, the existing record here, including the issues conference record, includes more than enough information on community character to satisfy the "hard look" standard for purposes of SEQRA review.)

In his 2010 decision in Red Wing Properties (four years after the Deputy Commissioner's decision in Crossroads Ventures), Commissioner Grannis affirmed an ALJ's ruling that community character cannot be separately adjudicated. 2010 N.Y ENV LEXIS 31, at *14-16. While the Commissioner recognized that "community character falls expressly within the definition of 'environment' under SEQRA" (citing ECL § 8-0105(6); 6 NYCRR § 617.2(l)), he confirmed that for all the reasons previously articulated by his predecessors in St. Lawrence

NYSDEC OHMS Document No. 201166576-00038

Cement and Crossroads Ventures, community character cannot be separately adjudicated under the Department's Part 624 permit hearing procedures:

> In Ruling 3.1, the ALJ ruled that while community character may well be an issue for me to consider as I make my SEQRA findings toward the end of the administrative process in this matter, it is not appropriately developed as an independent issue for adjudication…. I agree with the ALJ's ruling on community character…[3]

Red Wing Properties, 2010 N.Y ENV LEXIS 31, at *14-16. Also, like previous decisions on the community character issue, Commissioner Grannis concluded "that the record contained the necessary information for me to consider the issue of community character." Id. at *16. Commissioner Grannis ultimately held that "because impacts to community character are implicated in other issues for adjudication – noise, visual, and traffic impacts – the record on community character can be further developed through those issues." Id. at *17.

St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties each articulate the same and now well-established rule that community character impacts cannot be separately adjudicated under the Department's Part 624 permit hearing procedures.[4] 2010 N.Y ENV LEXIS 31, at *14-17; 2006 N.Y. ENV LEXIS 88, at *77-79; 2004 N.Y. ENV LEXIS 60, at *136-139. For purposes of analyzing a project's impacts on community character under SEQRA, the Department will primarily rely on and defer to truly local land use plans as the standard. Id. While additional information on community character can be incorporated into the SEQRA record and considered in making findings at the conclusion of the SEQRA process, the

[3] Commissioner Grannis modified the ALJ's ruling on community character to the extent it directed consideration of "the effect on property values from the siting of facilities, including a mine," because such an effect "is not properly considered in the context of community character." Red Wing Properties, 2010 N.Y. ENV LEXIS 31, at *18.

[4] During the issues conference, counsel to Gas Free Seneca made the following erroneous statement: "There is no basis that I know of in the law for treating community concerns differently than all of the other relevant areas of environmental concern. All of those issues, if there are disputed issue of fact… are adjudicable in this proceeding." (Tr. at 94.) The fact that St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties each held that community character impacts cannot be separately adjudicated under the Department's Part 624 permit hearing procedures demonstrates that counsel's statement was incorrect.

Department will not adjudicate or attempt to resolve different perspectives on community character in the context of an adjudicatory hearing. Id. After the record is developed on particular environmental issues, the impacts of those issues on community character will be determined at the conclusion of the SEQRA process. Id.

Here, while petitioners contend that the DSEIS does not adequately evaluate the Project's impact on community character, the alleged community character impacts asserted by petitioners are largely based on other environmental issues – visual, traffic, noise, and safety impacts – that are comprehensively and adequately analyzed in the DSEIS, its appendices, related study documents, and the FGEIS on the Oil, Gas and Solution Mining Regulatory Program[5], and the sufficiency of those analyses is also addressed in this and other filings by Finger Lakes LPG Storage.[6] Notably, petitioners admitted during the issues conference that the issue of cavern integrity "wouldn't have necessarily had much to do with community character." (Tr. at 568). While the Project's visual, traffic, noise or safety effects are theoretically subject to adjudication in their own right (although there is no basis for adjudication of any of those issues in this proceeding), it is well established that community character cannot be adjudicated as a separate issue. See Red Wing Properties, 2010 N.Y ENV LEXIS 31, at *14-17; Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *77-79; St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *136-139.

Instead, ultimate findings regarding the Project's potential community character impacts will be made at the conclusion of the SEQRA process and will be based on the now further enhanced SEQRA record, which includes, among other things, relevant information on community character in the DSEIS (see, e.g., §§ 4.5.2, 4.6.1 – discussing the existence of

[5] See FGEIS on the Oil, Gas and Solution Mining Regulatory Program (initially published in 1992 and reprinted in 2003), chapter XVI of incorporated DGEIS.
[6] See DSEIS §§ 4.3, 4.4, 4.5, and 4.6.

wineries in the area of the Project), public comments, the extensive information on community character included in several petitions for party status and the numerous exhibits/appendices thereto, and other aspects of the issues conference record. See Dudley Road, 214 A.D.2d at 280; Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *78-79; St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *141. Even assuming, arguendo, that the DSEIS could have included a greater amount of explicit analysis on community character, it is now difficult to imagine any SEQRA record having a more comprehensive treatment of a project's potential impacts on community character than the record now established as a result of the issues conference.[7] Whatever objections petitioners may have had to the extent of the community character analysis included in the DSEIS have now been addressed, and the record contains more than sufficient information for the Department to take the requisite "hard look" at the Project's community character impacts before issuing its findings.[8] See Webster Assoc. v. Town of Webster, 59 N.Y.2d 220, 228-229 (1983); Save the Pine Bush, Inc. v. Common Council of City of Albany, 13 N.Y.3d 297, 307 (2009) (holding that city complied with SEQRA because Court "satisfied

[7] During the issues conference, counsel to Gas Free Seneca attempted to distinguish St. Lawrence Cement from the instant case because the DEIS at issue in St. Lawrence Cement "covered the trend away from industrial uses and towards greater reliance on recreation and tourism," whereas the DSEIS here "has no discussion of community character." (Tr. at 93.) The holding in St. Lawrence Cement that community character is not a separately adjudicable issue was in no way dependent on the degree of analysis of the community character issue present in the DEIS in that matter, however. 2004 N.Y. ENV LEXIS 60, at *134-141. Indeed, there was sharp disagreement among the parties to St. Lawrence Cement on whether the community character analysis in the DEIS should have included "the entire Mid-Hudson River Valley region" or only the three host municipalities. Id. at *119, 134-135, 141. Moreover, while the words "community character" may not appear in the DSEIS, particular potential Project impacts like visual, traffic, noise, and safety issues that petitioners argue will impact community character are each evaluated in the DSEIS (see Sections 4.3, 4.4, 4.5, and 4.6), the DSEIS discusses the existences of wineries in the area of Project (see Sections 4.5.2, and 4.6.1), the Project is a use permitted in the Town of Reading by special permit, and the development of the community character issue in the SEQRA record is now remarkably robust.

[8] Although the law is clear that petitioners' community character submissions can be accepted into the SEQRA record as a supplement to the DSEIS and considered by the Department in making its ultimate evaluation of the Project's community character impacts, petitioners repeatedly resisted that suggestion by the Chief ALJ during the issues conference, and instead insisted that the entire DSEIS be redrafted and resubmitted for public comment. (Tr. at 25-26, 36.) This insistence raises the question of whether petitioners are participating in the SEQRA process for its intended goal of enabling the Department "to intelligently 'assess and weigh the environmental factors'" relevant to the Project (see WEOK Broadcasting Corp. v. Planning Bd. of Town of Lloyd, 79 N.Y.2d 373, 380 (1992)) or are instead merely attempting to perpetually delay or kill the Project.

NYSDEC OHMS Document No. 201166576-00038

that the EIS – specifically, Futyma's supplemental report responding to comments on the DEIS – contains an adequate evaluation of any threat to the Frosted Elfin butterfly and the Adder's Mouth Orchid"); Horn v. IBM Corp., 110 A.D.2d 87, 97 (2d Dep't 1985) ("If, however, the information omitted from the draft EIS was subject to extensive public scrutiny and discussion during the SEQRA proceedings, the absence of this data from the draft EIS is not to be considered a fatal defect.").

While St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties each recognized that community character impacts must be evaluated under SEQRA and included in the Department's ultimate SEQRA findings, all three decisions also held that community character cannot be separately adjudicated under the Department's Part 624 permit hearing procedures. 2010 N.Y. ENV LEXIS 31, at *15-17; 2006 N.Y. ENV LEXIS 88, at *77-79; 2004 N.Y. ENV LEXIS 60, at *136-141. Several petitioners apparently fail to accept this fundamental distinction between the function of the substantive requirements of SEQRA under Part 617 on the one hand and the procedural requirements of the Department's permit hearing procedures under Part 624 on the other,[9] as indicated by petitioners' repeated erroneous assertions that Chinese Staff and Workers Association v. City of New York, 68 N.Y.2d 359 (1986), mandates the separate adjudication of the Project's alleged community character impacts. (Tr. 21-22, 29, 94).

[9] For example, counsel to the Wine Business Coalition argued that because community character is included within the statutory definition of "environment" under SEQRA (see ECL § 8-0105(6)), a project's consistency with community character must be adjudicable under the Department's Part 624 permit hearing procedures. (Tr. at 97.) As previously noted, however, the fact that community character is included within the definition of "environment" under SEQRA is a different question from whether community character can be separately adjudicated. St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties each recognized that community character was included within the definition of "environment" under SEQRA, but each case also held that community character impacts cannot be separately adjudicated. 2010 N.Y. ENV LEXIS 31, at *15-17; 2006 N.Y. ENV LEXIS 88, at *77-79; 2004 N.Y. ENV LEXIS 60, at *136-141.

NYSDEC OHMS Document No. 201166576-00038

In Chinese Staff the Court held that a conditional negative declaration for a luxury housing development in Chinatown violated SEQRA because the lead agencies failed to consider whether the project would accelerate the displacement of local low-income residents and businesses or alter the character of the community. 68 N.Y.2d at 366-367. Chinese Staff held that "the impact that a project may have on population patterns or existing community character, with or without a separate impact on the physical environment, is a relevant concern in an environmental analysis" under SEQRA "since the statute includes these concerns as elements of the environment." Id. at 366. Contrary to petitioners' arguments, Chinese Staff has nothing to do with whether community character is a separately adjudicable issue under the Department's Part 624 permit hearing procedures (the Department was not even a party in Chinese Staff). So long as the Department takes a "hard look" at community character impacts and makes a "reasoned elaboration" of the basis for its determination prior to the conclusion of the SEQRA process, the Department's substantive SEQRA obligations are properly discharged (regardless of whether the issue is adjudicated). See id. at 363-364. And petitioners' erroneous contention that Chinese Staff mandates the separate adjudication of the Project's alleged community character impacts is not only jurisprudentially incorrect but is also tantamount to asserting that St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties were all wrongly decided.

Importantly, unlike the situation in Chinese Staff, where the SEQRA process had concluded (by the issuance of a negative declaration) without the lead agencies considering the impacts of the luxury housing development on community character, here the SEQRA process relating to the Project is ongoing and the record on community character has been extensively developed and the DSEIS supplemented by the participation of several parties. See Webster Assoc., 59 N.Y.2d at 228-229; Horn, 110 A.D.2d at 97 ("the absence of data from the draft EIS

NYSDEC OHMS Document No. 201166576-00038

is not to be considered a fatal defect" where "the information omitted" has been "subject to extensive public scrutiny and discussion during the SEQRA proceedings").

Thus, based on the well-established Commissioner precedent articulated in St. Lawrence Cement, Crossroads Ventures, and Red Wing Properties, the Project's consistency with community character cannot be separately adjudicated under the Department's Part 624 permit hearing procedures.

B. The Controlling Local Land Use Plans of the Host Communities Demonstrate that the Project is Consistent with Community Character – And Petitioners' Arguments to the Contrary are Baseless

The Project is consistent with the land use plans adopted by the communities where the Project will be located – the Town of Reading and Schuyler County – which the Department primarily relies upon in defining community character. These land use plans conclusively establish that the local community character includes ongoing industrial development like the Project. Petitioners ignore these land use plans from the host communities (and even go so far as to assert, counterfactually, that they do not exist) to argue for the existence of a region-wide trend away from any industrial development in the Finger Lakes. Petitioners' repeated assertions that the entire Finger Lakes region has abandoned industrial activity of any kind in favor of an economy based entirely on tourism and viticulture is directly and unambiguously contradicted by numerous sections in the controlling local land use plans of the host communities. The local land use plans of the Town of Reading and Schuyler County demonstrate beyond peradventure that the Project is consistent with community character, and petitioners' assertions to the contrary are baseless.

As noted above, the "Department, to a large extent, relies on local land use plans as the standard for community character." Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *77; St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *137 (identical language); Red Wing

NYSDEC OHMS Document No. 201166576-00038

Properties, 2010 N.Y. ENV LEXIS 31, at *15 ("The character of a community can be determined mainly by local land use plans and local zoning ordinances."); see also, e.g., Wallach, 23 N.Y.3d at 742-743 (observing that Municipal Home Rule Law "empowers local governments to pass laws both for the 'protection and enhancement of [their] physical and visual environment,'" and "local regulation of land use is 'among the most important powers and duties granted … to a town government'").

Here, the Project is consistent with the adopted land use plan of the host municipality – the Town of Reading – which the Department must primarily rely upon and defer to in defining community character. Id. The Town of Reading Comprehensive Plan ("TRCP") recognizes that the town "has a well-balanced tax base because of such non-residential properties as the Nobel-Akzo salt plant, the Texas Eastern gas pipeline facilities, the two railroad lines, and several tourist businesses."[10] "New large-scale business uses" such as the Project are allowed in the Town of Reading by special permit (TRCP at 3), and Finger Lakes LPG Storage submitted an Application for Special Permit Approval to the Town of Reading Planning Board on September 1, 2009; this application remains pending subject to resolution of the SEQRA process but the Town of Reading Planning Board has held two public hearings on the Project. DSEIS, Appendix A; see, e.g., Juda Const., Ltd. v. Spencer, 21 A.D.3d 898, 900 (2d Dep't 2005) ("A use permitted by special exception use permit is a use that has been found by the local legislative body to be appropriate for the zoning district and 'in harmony with the general zoning plan and will not adversely affect the neighborhood.'") (quoting leading case, North Shore Steak House v. Bd. of Appeals of Inc. Vil. of Thomaston, 30 N.Y.2d 238, 243 (1972)). As also noted in the DSEIS,

[10] TRCP at 1. The TRCP is available at www.schuylercounty.us/DocumentCenter/View/1380. The Chief ALJ may take official notice of the TRCP and the Schuyler County Countywide Comprehensive Plan under CPLR 4511(b) and 6 NYCRR § 624.9(a)(6).

NYSDEC OHMS Document No. 201166576-00038

multiple underground liquefied petroleum gas or natural gas storage facilities are already present in the Town of Reading.[11]

The Project's consistency with the TRCP is strong evidence that the Project will not adversely impact community character. See Red Wing Properties, 2010 N.Y. ENV LEXIS 31, at *15-16; Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *77; St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *137. Given the importance of the TRCP in defining community character, it is notable that counsel for petitioner Seneca Lake Communities was not even aware that the TRCP existed as he erroneously told the Chief ALJ during the issues conference that the Town of Reading had no comprehensive land use plan (neither the Town of Reading nor Schuyler County oppose the Project and are not part of "Seneca Lake Communities"). Tr. at 34.

The Project's consistency with community character is not only established by the TRCP but also by numerous passages from the Schuyler County Countywide Comprehensive Plan (or "SCCCP"), which was adopted less than a year ago in May 2014 and is described as the "blueprint" for the community.[12] The SCCCP was the product of more than two years of efforts by numerous stakeholders, including at least one community that now opposes the Project in this proceeding.[13] The SCCCP contains numerous statements demonstrating that Schuyler County has placed an emphasis on economic and industrial development:

> As new development occurs there should be a focus on attracting industries that will contribute to year round job growth within the county.[14]

And the SCCCP also demonstrates that (contrary to petitioners' contentions) the local officials responsible for defining community character in Schuyler County do not regard industrial development and tourism as incompatible or mutually exclusive but, instead, one of

[11] DSEIS § 4.1.3.1.
[12] SCCCP at 2. The SCCCP is available at: www.schuylercounty.us/DocumentCenter/View/2215.
[13] SCCCP at IV, 2.
[14] SCCCP at 25.

NYSDEC OHMS Document No. 201166576-00038

the benefits of increased tourism is that it makes Schuyler County more attractive to industrial development like the Project, which brings good jobs and increased tax revenues:

> The County should continue to focus on an economic development strategy that utilizes our existing agricultural and tourism assets as leverage for potential industrial and commercial development that will positively contribute to the local tax base and employ local residents.[15]

The text of the SCCCP specifically addressing the Town of Reading also confirms that the Project is consistent with the town's community character. According to the SCCCP, manufacturing accounts for 46% of all jobs in the Town of Reading and is defined as the "primary employment industry" in the town.[16] The SCCCP further notes:

> The natural resources of Reading help make the Town economically successful. US Salt, the Town's largest employer and an important source of manufacturing in the region, is located within Reading on the Watkins Glen border.[17]

The existence of a robust manufacturing industry in Reading and the resulting high-paying jobs are critical elements of the community's character that have resulted in the town having one of the strongest economies in the region:

> The economic climate of the Town of Reading is one of the best in Schuyler County. Reading has the highest median household income ($58,583) of all towns in the County, the lowest unemployment rate (3.1%), and second lowest poverty rate (4.2%).[18]

The SCCCP also shows that the Project would be located in a section of Reading where the existing land use pattern is "industrial."[19]

The 2014 SCCCP replaced the 2004 Schuyler County Comprehensive Plan ("2004 SCCP"), which took more than five years to create.[20] A comparison of the 2004 SCCP and the

---

[15] SCCCP at 36; see also SCCCP at 20 ("As industries and tourism continue to grow throughout the County, additional traffic congestion and infrastructure issues will arise.")
[16] SCCCP at 29, 70.
[17] SCCCP at 68 (emphasis added).
[18] SCCCP at 68.
[19] SCCCP at A-8.
[20] 2004 SCCP at iii (the 2004 SCCP is available at: www.schuylercounty.us/DocumentCenter/View/1368).

NYSDEC OHMS Document No. 201166576-00038

2014 SCCCP provides further confirmation of the Project's consistency with community character. After noting that "Schuyler County industries rely on truck and rail service for the movement of goods," the 2004 SCCP lists a "goal" to "Utilize existing railways for transportation" with an "objective" to "Increase industrial/commercial use of existing railways."[21] Another express goal of the 2004 SCCP was "The Schuyler County Legislature needs to be cognizant and supportive of economic development that spurs desirable growth."[22] The Schuyler County Legislature passed a resolution in support of the Project in 2014, which demonstrates that the legislature views the Project as "desirable growth" consistent with community character.[23] (Tr. at 632.)

Given petitioners' statement that community character is the issue of "greatest concern" (Tr. at 18), and the numerous Commissioner decisions holding that community is character is primarily defined by local land use plans (see Red Wing Properties, 2010 N.Y. ENV LEXIS 31, at *15-16; Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *77; St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at *137), it is glaring that petitioners' community character arguments totally ignore the provisions of the TRCP and the SCCCP. Petitioners ignore these controlling local land use plans because they completely contradict petitioners' baseless assertions that the Project is inconsistent with community character; and the existence of the TRCP and the SCCCP stands in the way of petitioners' illegal efforts to change these well-established and longstanding plans through the improper vehicle of a state permit hearing process.

[21] 2004 SCCP at 53.
[22] 2004 SCCP at 17.
[23] Schuyler County Legislature Resolution No. 213 of 2014 (available at: www.schuylercounty.us/ DocumentCenter/View/2149).

NYSDEC OHMS Document No. 201166576-00038

Instead of relying on the TRCP, petitioners instead attempt to define community character based on subjective and highly debatable assertions regarding regional development trends; for example:

> …the character of the Finger Lakes region has been increasingly returning to its historic identity as a center for viticulture, agri-business, and recreation and tourism due, in no small part to the active efforts of local municipalities. This conscious trajectory, reflected in the local planning documents of the Seneca Lake Communities and regional planning efforts, breaks strongly from the region's 20th Century industrial past toward a future that is more bucolic, clean, and environmentally and economically sustainable.[24]

Petitioners also repeatedly claimed during the issues conference that the Project would violate the "sense of place" allegedly extant in the Finger Lakes (Tr. at 22-23) because the region is supposedly in the process of abandoning all industrial development in favor of an economy based exclusively on tourism/viticulture:

> We believe that we can provide you perspective of the character of Seneca Lake and the Finger Lakes wine country, the social and economic vitality and base of the area. That it overshadows and stigmatizes the region to allow a facility of this nature to be brought into the community that it can lead to other large scale industrial projects and create a potential for environmental catastrophe and ultimately transforms the Finger Lakes wine country from the unique configuration of glacier formed lakes, rolling hillsides, vineyards, bucolic viewsheds and historic villages back to an industrial past of environmental degradation and economic blight.

(Tr. at 38-39.) Petitioners' postulations of a region-wide trend away from any industrial development in the entire Finger Lakes area are clearly belied, however, by numerous provisions of the TRCP and the SCCCP, including those cited above. The TRCP and the SCCCP establish that the character of the community includes both historical and future industrial development

[24] Seneca Lake Communities petition at 8-9 (internal citations omitted). Section III.B of Finger Lakes LPG Storage's Response to Party Status petitions detailed how petitioners' offers of proof and substantive contentions regarding these purported community character development trends are comprised of factually baseless and non-empirical speculation which cannot raise an adjudicable issue.

like the Project.[25] The TRCP and the SCCCP, which control and establish the definition of the community character, plainly contradict petitioners' entire community character arguments. The pertinent local land use plans simply provide no support whatsoever for petitioners' claims that industrial development like the Project is inconsistent with the community character in the Town of Reading or Schuyler County.

During the issues conference, counsel to petitioner Gas Free Seneca argued that merely by raising a disputed factual issue regarding community character, petitioners had satisfied their burden to establish an adjudicable issue:

> Here the Applicant is denying there is any local trend away from heavy industrial uses and that alone, Your Honor, is a factual issue that ought to be adjudicated…..
>
> There is no basis that I know of in the law for treating community character concerns differently than all the other relevant areas of environmental concern. All of those issues, if there are disputed issues of fact and I just named one, are adjudicable in this proceeding.

(Tr. at 94.) Counsel's statements are legally and factually incorrect in multiple respects. First, as discussed in the preceding subsection, the Project's consistency with community character cannot be separately adjudicated. Second, even if the Project's consistency with community character could be separately adjudicated (which it cannot), petitioners' burden is more than to simply assert the existence of a "disputed issue of fact;" rather, petitioners must establish a "factual foundation" and/or "scientific foundation" for its community character arguments that cannot be rebutted. See Buffalo Crushed Stone, 2008 N.Y. ENV LEXIS 69, at *13; Crossroads Ventures, LLC, 2006 N.Y. ENV LEXIS 88, at *10 (to raise an adjudicable issue, a potential party must do more than merely take a position opposite to that of the applicant or Department staff"). Inasmuch as petitioners' community character arguments are completely contradicted by

[25] E.g., TRCP at 3; SCCCP at 20, 25, 29, 36, 68, and 70.

NYSDEC OHMS Document No. 201166576-00038

the TRCP and the SCCCP, those arguments lack a "factual foundation" in the local land use plans that actually define community character and are thus baseless. And even if there was a legitimate factual dispute regarding the Project's consistency with community character (which there is not), it is well established that subjective "differences of opinion about which particular community values and trends deserve protection" cannot be effectively adjudicated under the Department's Part 624 permit hearing procedures – which is one of the principal reasons a project's consistency with community character cannot be separately adjudicated in the first place (as discussed in the preceding subsection). See St. Lawrence Cement, 2004 N.Y. ENV LEXIS 60, at * 139-141.

The local land use plans of the Town of Reading and Schuyler County demonstrate that the Project is consistent with community character, and petitioners' assertions to the contrary are baseless.

C. 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

Although the Project is consistent with the Town of Reading Comprehensive Plan and the Schuyler County Countywide Comprehensive Plan, and neither the Town of Reading nor Schuyler County oppose the Project, some petitioners mistakenly argued in their party status petitions that the DSEIS is inadequate because it fails to evaluate the Project's impacts on community character in the context of "the planning goals of other municipalities in the region," including the 12 outside municipalities/counties that comprise petitioner Seneca Lake Communities.[26] There is no legal basis for requiring an evaluation of the Project's consistency with the land use plans of non-host communities from throughout the greater Finger Lakes

[26] Seneca Lake Communities petition at 12.

NYSDEC OHMS Document No. 201166576-00038

region, however, and petitioners' arguments are tantamount to an improper effort by outside municipalities/counties to override home rule and the ability of the Town of Reading and Schuyler County to define the character of their own community.

During the issues conference, counsel to the Seneca Lake Communities asserted that the Second Department's decision in Village of Chestnut Ridge v. Town of Ramapo, 45 A.D.3d 74 (2d Dep't 2007), supported defining community character at a regional level instead of the well-established deference to the local host communities in establishing community character. (Tr. 35-36.) Village of Chestnut Ridge states nothing of the sort, however, and the decision actually undercuts petitioners' arguments.

In Village of Chestnut Ridge, four villages located within the Town of Ramapo claimed that the town failed to comply with SEQRA in enacting a local law permitting adult student living facilities in certain residential zones directly adjacent to the village borders. 45 A.D.3d at 76. In evaluating whether the villages had standing to assert their SEQRA claims, the court noted that the "power to define the community character is a unique prerogative of a municipality acting in its governmental capacity," and the villages were asserting the right to exercise that authority "in the face of the potential threat posed by the Town's action with respect to the property along the Villages' borders." Id. at 94-95 (emphasis added). The court ultimately held that because the a "substantial development in an adjoining municipality can have a significant detrimental impact on the character of a community," the villages had "established a 'demonstrated interest in the potential environmental impacts' of the adult student housing law" necessary to "have standing to seek judicial review of the SEQRA process that resulted in its adoption." Id. (emphasis added).

NYSDEC OHMS Document No. 201166576-00038

At most, Village of Chestnut Ridge stands for the proposition that a municipality may have standing under SEQRA to challenge whether a land use decision in an immediately adjacent municipality sufficiently analyzed potential impacts on the community character of a bordering municipality. Id. As a standing-based decision, the holding in Village of Chestnut Ridge cannot support anything other than the municipality "punched its ticket" to the front door of the court to make its substantive arguments (the decision remanded the case to Supreme Court for a determination on the merits). Id. at 94-95, 97. In addition, given the focus of Village of Chestnut Ridge on the direct physical proximity of the adult student living facilities to the borders of the four villages in evaluating potential community character impacts, the decision undercuts petitioners' argument that SEQRA requires analysis of the Project's alleged impacts on the community character of the entire Finger Lakes region or the land use plans of municipalities located nowhere near the Project site.

Further, the Commissioner's decision in St. Lawrence Cement specifically rejected the contention that alleged regional impacts needed to be included in an evaluation of community character.[27] 2004 N.Y. ENV LEXIS 60, at *136-141.

Neither the Town of Reading, Schuyler County, nor any of the other six towns in Schuyler County oppose the Project. Of the 12 municipalities/counties comprising Seneca Lake Communities, only two municipalities actually border the Town of Reading – the Town of

[27] During the issues conference, counsel to the Wine Business Coalition stated: "We would also submit that the case law is clear that community character can be a region. In Wal-Mart Stores versus North Alba [sic], they looked at the region of the Adirondacks in considering whether or not a Wal-Mart store affected the community character." (Tr. 97-98). The case counsel cited, Wal-Mart Stores Inc. v. Planning Bd. of Town of North Elba, 238 A.D.2d 93 (3d Dep't 1998), says nothing of the sort. The word "Adirondacks" is not even mentioned in the decision. Moreover, the court in Wal-Mart Stores upheld the decision of the local planning board to deny the application for the proposed Wal-Mart store because "it did not satisfy the relevant criteria set forth in the Town Land Use Code." 238 A.D.2d at 97. The court in Wal-Mart Stores also upheld the town planning board's conclusion that the proposed Wal-Mart would be inconsistent with community character, but there is nothing in the decision indicating that the board's determination was based on anything other than the land use plan of the town itself. Id. at 99.

NYSDEC OHMS Document No. 201166576-00038

Starkey to the north and the Village of Watkins Glen to the south – but the Project site is located approximately three miles away from the border between the Town of Reading and each of those municipalities (in contrast to the adult student living facilities located directly along the borders of the adjacent municipalities at issue in Village of Chestnut Ridge). DSEIS § 4.5.2. Most of the municipalities comprising Seneca Lake Communities are located nowhere near the Town of Reading; for example, the Town of Ithaca, the Town of Ulysses, and the City of Geneva are each located at least 35 miles from the Town of Reading. Petitioners' arguments that these remote municipalities can define the community character in the Town of Reading and effectively override the town's comprehensive plan cannot be reconciled with the holding in Village of Chestnut Ridge that the "power to define the community character is a unique prerogative of a municipality acting in its governmental capacity." 45 A.D.3d at 94. And, the attempts by these remote communities to dictate community character in the Town of Reading also violates the well-established rule that the Department primarily "relies on local land use plans as the standard for community character." Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *77 (emphasis added); see Red Wing Properties, 2010 N.Y. ENV LEXIS 31, at *15-16; St. Lawrence Cement, 2006 N.Y. ENV LEXIS 60, at *137; see also, e.g., Wallach, 23 N.Y.3d at 742-743.

Accordingly, the Project's consistency with community character must be based primarily on the land use plan in the Town of Reading, and there is no legal basis to evaluate alleged regional community character impacts based on land use plans in remote non-host communities.

IV. The Analysis of Alternatives in the DSEIS Complies with the Requirements of SEQRA

Some petitioners allege that the analysis of alternatives to the Project in the DSEIS does not satisfy SEQRA because (1) the DSEIS does not adequately evaluate the "no action"

NYSDEC OHMS Document No. 201166576-00038

alternative and (2) certain specified alternatives to the Project are not evaluated. These erroneous arguments ignore relevant provisions of the DSEIS, the Final Scoping Outline for the DSEIS issued by the Department on February 15, 2011, and controlling law and Departmental policies on the requirements of an alternatives analysis under SEQRA. As detailed below, the analysis of Project alternatives in the DSEIS fully complies with the requirements of SEQRA.

A. The DSEIS Satisfies the Requirements of a No Action Discussion

Petitioners argue that the failure to include an express discussion of the no action alternative to the Project in the DSEIS violates SEQRA.[28] While the precise words "no action" are not used in the DSEIS, the DSEIS satisfies the substantive requirements for a no action discussion under SEQRA.

Under 6 NYCRR § 617.9(b)(5)(v), all draft environmental impact statements must include a discussion of the "no action alternative." 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." SEQRA Handbook at 124 (3d ed. 2010); see Wilmorite, Inc., Decision of the Commissioner, 1982 N.Y. ENV LEXIS 31, at *53 (NYSDEC 1982) (defining "the 'no action' alternative" as "the continuation of the present land use utilization of the proposed Project Site"). Furthermore, "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." SEQRA Handbook at 124; see Gernatt Asphalt Products, Inc., Rulings of the ALJ on Party Status and Issues, 1994 WL 1735233, *17 (NYSDEC 1994).[29] The DSEIS for the Project satisfies these requirements.

[28] Gas Free Seneca petition, p. 20.
[29] This Ruling, which is cited to several times in this Post-Issues Conference Brief, is not available on Lexis.

NYSDEC OHMS Document No. 201166576-00038

The DSEIS includes a "description of the likely circumstances" at the site of the Project if the Project "does not proceed." See SEQRA Handbook at 124. Nine separate sections of the DSEIS do exactly what a no action discussion requires by describing the existing environmental setting of the Project, which will remain the same if the Project does not proceed. See 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.

Moreover, the DSEIS clearly identifies the "direct financial effects of not undertaking" the Project, which is an adequate method to satisfy the no action discussion for "many private actions." SEQRA Handbook at 124; Gernatt Asphalt, 1994 WL 1735233, *17. As explained in the DSEIS, the long supply routes for the Northeast propane market create "imbalances where demand exceeds local available supply during peak periods;" such imbalances can be "extreme" during severe winters.[30] Regional supply imbalances can cause increases in retail prices to consumers between 20-35% which would increase the average price of a 400 gallon winter tank fill from $1000 to $1350" – and the percentage increase is exacerbated when fuel prices are lower.[31] The Project "will ultimately make available 2.1 million additional barrels or over 88 million gallons of local supply" that can be immediately available.[32] This additional supply will result in direct financial benefits to regional customers:

> The need for the Finger Lakes project is that pipeline allocations and the need for large volumes of spot product at higher pricing spreads will be dramatically reduced relieving millions of dollars of potential burden from consumers and helping to ensure the use of clean burning fuels.[33]

[30] DSEIS § 3.3.1.
[31] Id.
[32] Id.
[33] Id.

NYSDEC OHMS Document No. 201166576-00038

The current total estimated costs of the Project are approximately $58 million,[34] and the DSEIS then summarizes the economic benefits of the Project as follows:

> It is expected that approximately 50 construction jobs and 8-10 permanent full time jobs paying approximately $40-50,000/job will be created. In addition, the facility will result in indirect job creation, including jobs for railroad employees and trucking industry. Finger Lakes' operations in Schuyler County and the Town of Reading will also generate real property tax revenues for the County, Town and local school district.[35]

The DSEIS thus describes "the direct financial effects" of not undertaking the Project, which satisfies the requirement for a no action discussion under SEQRA. See SEQRA Handbook at 124; Gernatt Asphalt, 1994 WL 1735233, *17.

During the issues conference, petitioners argued that the default requirements to satisfy the no action analysis set forth in the SEQRA Handbook should not apply to the DSEIS for the Project "given the many issues being raised by the petitioning parties in this case." (Tr. at 440.) However, petitioners never commented during the scoping process for the Project that the normal requirements for a no action analysis should be inapplicable to the Project. As discussed in the following subsection, having failed to advance that position during the scoping process, petitioners cannot now, after the DSEIS has been written in compliance with the Final Scoping Outline, argue that the no action discussion in the DSEIS was required to go beyond the ordinary rules set forth in the SEQRA Handbook. See 6 NYCRR § 617.8(h).

Moreover, on February 16, 2012, Finger Lakes LPG Storage sent a letter to the Department that, among other things, supplemented the analysis in the DSEIS with a further

[34] The originally estimated Project costs of $40 million stated in the DSEIS have since been revised. See Economic and Fiscal Impact of the Finger Lakes LPG Storage Project at 15, prepared by Camoin Associates (dated February 9, 2015). The Camoin report was filed as the sixth attachment to Finger Lakes LPG Storage's February 9, 2015 Response to Party Status petition (which is issues conference Exhibit 30).

[35] DSEIS § 3.3.5.

NYSDEC OHMS Document No. 201166576-00038

four-page evaluation of the "no action" alternative (this letter is in the hearing record). (Tr. at 480-481.)

And, as a supplemental EIS, the required analysis in the DSEIS is limited "to issues either not addressed or inadequately addressed" in the FGEIS on the Oil, Gas and Solution Mining Regulatory Program. SEQRA Handbook at 6; 6 NYCRR § 617.10(d)(4). The FGEIS incorporated Section XXI(A) of the DGEIS, which addressed the effect of prohibition of developing resources like those used in the Project. This no action discussion in the FGEIS, coupled with the no action discussion in the DSEIS for the Project detailed above (and the no action discussion included in the February 16, 2012 letter), satisfies the requirements of SEQRA.

Inasmuch as the DSEIS for the Project satisfies the substantive requirements for a no action discussion, petitioners' arguments are based merely on the fact that the DSEIS does not use the words "no action alternative" (those words are used in Finger Lakes LPG Storage's February 16, 2012 letter to the Department). However, in assessing the sufficiency of environmental analysis, form cannot be elevated over substance. E.g., Wyoming v. U.S. Dept. of Agriculture, 661 F.3d 1209, 1263 (10th Cir. 2011); Metcalf v. Daley, 214 F.3d 1135, 1142 (9th Cir. 2000); see Town of Henrietta v. Dept. of Environmental Conservation, 76 A.D.2d 215, 220 (4th Dep't 1980) (citing federal NEPA precedent in interpreting the substantive requirements for an EIS under SEQRA). Because the DSEIS satisfies the substantive requirements for a no action discussion described above, the DSEIS complies with the requirements of Section 617.9(b)(5)(v) even when the words "no action alternative" are not expressly invoked.

B. The Analysis of Alternatives in the DSEIS Complies with the Requirements of the Final Scoping Outline and SEQRA

The alternatives to the Project to be evaluated in the DSEIS were defined in the Final Scoping Outline, and the DSEIS properly addresses each of those alternatives. However, some

NYSDEC OHMS Document No. 201166576-00038

petitioners argue that the DSEIS is inadequate because it does not evaluate "alternative sites" for the Project or the potential elimination of truck deliveries.[36] Petitioners' arguments are flawed in multiple respects. Since none of the petitioners commented during the scoping process (or after the scoping process pursuant to the procedures set forth in 6 NYCRR § 617.8(g)) on the alternatives analysis to be included in the DSEIS, to allow petitioners to argue now that the sufficiency of the DSEIS should be adjudicated on that basis would eviscerate and render meaningless the SEQRA scoping regulations which required all relevant issues to be raised before issuance of the Final Scoping Outline and provided Finger Lakes LPG Storage the discretion to exclude late-raised issues from the DSEIS. 6 NYCRR § 617.8(g, h). Moreover, petitioners' arguments violate the rule that the DSEIS was only required to analyze "reasonable alternatives" that are consistent with the "objectives and capabilities of the project sponsor." And the potential elimination of truck deliveries is a mitigation measure that does not require supplementation of the DSEIS. Contrary to petitioners' arguments, the DSEIS was not required to evaluate any alternatives not included in the Final Scoping Outline, and the analysis of alternatives to the Project in the DSEIS complies with SEQRA.

1. The Analysis of Alternatives Included the DSEIS Complied with the Final Scoping Outline, and Petitioners' Failure to Comment on the Project Alternatives Analysis During the Scoping Process Precludes Them from Now Seeking to Adjudicate the Sufficiency of the DSEIS on That Basis.

The analysis of Project alternatives included in the DSEIS was consistent with the requirements of the Final Scoping Outline and thus complied with SEQRA. During the issues conference, petitioners argued that their failure to comment on the necessary alternatives analysis during the SEQRA scoping process did not preclude them from seeking to adjudicate the

[36] Seneca Lake Communities petition at 21-22; Gas Free Seneca petition at 21-23.

adequacy of the DSEIS on that basis. (Tr. at 447-449.) Petitioners' argument would eviscerate the SEQRA scoping regulations and render them meaningless.

In evaluating petitioners' arguments regarding the sufficiency of the DSEIS's analysis of Project alternatives under SEQRA, three regulatory provisions must be harmonized and each given effect: (1) the SEQRA scoping rules under 6 NYCRR § 617.8(g, h); (2) the substantive SEQRA requirement under Section 617.11(d)(5) mandating the Department to evaluate and then certify in its findings whether the Project is the alternative that avoids or minimizes adverse environmental impacts to the maximum extent practicable; and (3) Section 624.4(c)(6)(i)(b) of the Department's permit hearing procedures, which provides for the potential adjudication of the sufficiency of a DEIS. While, as discussed below, these three regulatory provisions can easily be harmonized, petitioners' arguments would disharmonize the regulations and render the SEQRA scoping rules a meaningless nullity.

A Final Scoping Outline for the DSEIS was issued by the Department on February 15, 2011. The "purpose of scoping is to narrow issues." SEQRA Handbook at 102; see 6 NYCRR § 617.8(a) ("The primary goals of scoping are to focus the EIS on potentially significant adverse impacts and to eliminate consideration of those impacts that are irrelevant or nonsignificant."). As summarized in Section 3.1.3 of the Final Scoping Outline, the "scoping process establishes the content of the DSEIS." One of the objectives of scoping is to "define reasonable alternatives for avoiding specific impacts which must be included in the EIS, either as individual scenarios or a range of alternatives."[37] SEQRA Handbook at 103; 6 NYCRR § 617.8(f)(5) (the final written

[37] The SEQRA Handbook and the SEQRA regulations themselves demonstrate that counsel to petitioner Seneca Lake Pure Waters Association was simply incorrect when he stated that "the evaluation of reasonable alternatives is not part of the scoping process, but that's understood to be part of the EIS process." (Tr. at 489.) Section 617.8(f)(5) states that the final written scope should include "the reasonable alternatives to be considered." There are also numerous examples of the scoping process being used to narrow the alternatives to be considered in a DEIS. E.g., Horn v. Westchester County, 106 A.D.2d 612, 612 (2d Dep't 1984) ("Originally, five alternative routes for transporting the wastes to the county treatment plants were evaluated. From these five alternatives, three

NYSDEC OHMS Document No. 201166576-00038

scope should include "the reasonable alternatives to be considered"). "There is a strong presumption that a final scope acts essentially as a 'contract' between the lead agency and the sponsor, to give both certainty and reliance as to expectations for the actual EIS that is to be produced." SEQRA Handbook at 103.

The SEQRA scoping regulations state that "all relevant issues should be raised before the issuance of the final written scope." 6 NYCRR § 617.8(g). If an issue is raised after publication of the final written scope, and the entity raising the issue provides a written statement explaining why the issue was not raised during scoping and why the issue should nevertheless be evaluated, the project sponsor may incorporate the late-raised issue in the DEIS "at its discretion." 6 NYCRR § 617.8 (g, h); SEQRA Handbook at 109. "Any substantive information not incorporated into the draft EIS must be considered as public comment on the draft EIS," which comments are part of the SEQRA record that can be used by an agency in evaluating any issue – including potential alternatives to a project – prior to making final SEQRA findings. See 6 NYCRR § 617.8(h); Dudley Road, 214 A.D.2d at 280.

In addition to these sections addressing scoping, the SEQRA regulations state that before any agency makes a final decision to approve or disapprove an action, it must issue a SEQRA findings statement that, among other things, certifies that "from the alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable." 6 NYCRR § 617.11(d)(5).

---

were chosen, after a scoping session attended by the involved agencies, as being the most desirable for IBM to address in its DEIS."); Orange County Dep't of Public Works, Decision of the Commissioner, 1988 N.Y. ENV LEXIS 28, at *69-70 (NYSDEC 1988) ("Long before the publication of the SWMP or the Recycling Policy, in December 1984, the Applicant was made aware during the scoping process which took place during the OCSLIP meetings that the DEIS should include a thorough analysis of recycling as a partial alternative to expanding the landfill at the Site.").

NYSDEC OHMS Document No. 201166576-00038

Although not part of the SEQRA regulations, the Department's Part 624 permit hearing regulations provide that when the Department as the lead agency has required preparation of a DEIS, the sufficiency of the DEIS under SEQRA may be adjudicated if a petitioner raises a substantive and significant issue. 6 NYCRR § 624.4(c)(6)(i)(b).

Under well-settled principles of statutory and regulatory construction, both of the relevant sections of the SEQRA regulations and the Department's permit hearing regulations "must be considered together and with reference to each other," and all three sections "are to be harmonized, giving effect and meaning to all provisions." See People v. Mobil Oil Corp., 48 N.Y.2d 192, 199 (1979); McKinney's Statutes § 98; see Garzilli v. Mills, 250 A.D.2d 131, 137 (3d Dep't 1998) ("Generally, the same canons of construction are applicable to legislation and administrative regulations."); Cortland-Clinton, Inc. v. NYS Dept. of Health, 59 A.D.2d 228, 231 (4th Dep't 1977) ("In construing administrative rules, the same canons of construction applicable to statutes are to be used.").

Here, the Final Scoping Outline defined three alternatives to the Project to be evaluated: (1) alternative sites in the "general project area" owned by, or under option to, Finger Lakes LPG Storage;[38] (2) alternative sizes of the Project, specifically including comparisons of one or two brine ponds; and (3) alternative access using a neighboring property, with an existing permitted driveway, to access the Project facilities. The DSEIS addresses each of these alternatives. With respect to (1) alternative sites and (3) alternative access using a neighboring property, the DSEIS states:

> Given 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,

[38] As noted during the issues conference, there are no other caverns within 30 miles of the "general project area" that Finger Lakes LPG Storage either owns or has an option to purchase. (Tr. at 468-470.)

NYSDEC OHMS Document No. 201166576-00038

> 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.[39]

With respect to alternative sizes for the Project, the DSEIS evaluates five alternative Project designs, including: two ponds in the current location; two ponds aligned in an alternative north/south orientation; a single pond located on the property purchased for rail siding; a single pond north of the cemetery; and a single or double pond layout on the US Salt property. Thus, in compliance with the requirements of SEQRA, the DSEIS evaluated the range of reasonable alternatives defined in the Final Scoping Outline.

Some petitioners argue that the DSEIS is inadequate because it does not evaluate certain alternatives not included in the Final Scoping Outline, including "alternative sites" and elimination of truck deliveries.[40] However, petitioners never commented during the scoping process that the DSEIS should analyze these Project alternatives. Petitioners argued during the issues conference that their failure to raise these issues during the scoping process does not preclude them from now seeking to adjudicate the sufficiency of the DSEIS on these bases:

> The final scope does not shield the Applicant, nor for that matter the Department, from being challenged in the permit hearing process for failing to obey SEQR. They are still required to comply with the law….
>
> The Applicant also relies on one line in the SEQR Handbook comparing a final scope to a quote unquote contract between the lead agency and the sponsor. The handbook does say that there is a presumption toward seeing the final scope that way, but no agreement between DEC and the project sponsor can contract away SEQRA.

(Tr. at 448-449.) Contrary to petitioner's argument, Finger Lakes LPG Storage has never argued that the Final Scoping Outline "can contract away SEQRA." The range of substantive issues that

[39] DSEIS § 5.0.
[40] Seneca Lake Communities petition, pp. 21-22; Gas Free Seneca petition, pp. 21-23.

NYSDEC OHMS Document No. 201166576-00038

must be analyzed under SEQRA – including the requirement that the Department evaluate Project alternatives and ultimately certify that the Project is the alternative that "avoids or minimizes adverse environmental impacts to the maximum extent practicable" – cannot be curtailed by the scoping process. See 6 NYCRR § 617.11(d)(5). Nor do the "reasonable alternatives to be considered" set forth in the Final Scoping Outline prevent any adjudication of the sufficiency of the DSEIS's Project alternatives analysis under 6 NYCRR § 624.4(c)(6)(i)(b). However, the substantive requirements of SEQRA and the Department's permit hearing regulations must be harmonized with the provisions of the scoping regulations. See 6 NYCRR § 617.8(g, h); Mobil Oil, 48 N.Y.2d at 199. The three sections can be harmonized and each given effect by precluding a party that failed to raise an issue during the scoping process from challenging the sufficiency of the DSEIS on that basis in a Part 624 hearing but still requiring that the FGEIS address the issue sufficiently for the Commission to have an adequate record upon which to make SEQRA findings.

If the Department concluded that, notwithstanding the content of the Final Scoping Outline, additional analyses of Project alternatives beyond those included in the DSEIS was necessary to make the SEQRA findings required under 6 NYCRR § 617.11(d)(5), the Department could require that additional information on Project alternatives be developed in the SEQRA record prior to conclusion of the SEQRA process. For example, adding further information on Project alternatives to the SEQRA record through the response to comments process of the FGEIS is an acceptable response to an alleged shortcoming in the DSEIS – and there is no requirement, as petitioners erroneously assert, of having to go back to square one by redrafting the DSEIS, restarting the public comment process, or adjudicating the issue in a Part 624 hearing. See Webster Assoc., 59 N.Y.2d at 228-229 (failure to consider a particular

NYSDEC OHMS Document No. 201166576-00038

alternative in a DEIS was not fatal where it was "clear from the record that both the general public and the relevant public officials were thoroughly familiar with this alternative"); Save the Pine Bush, Inc. v. Common Council of City of Albany, 13 N.Y.3d at 307 (2009) (SEQRA satisfied where supplemental report responding to comments on the DEIS evaluated threats to particular species); Horn, 110 A.D.2d at 97 (absence of information from a DEIS is not considered to be a fatal defect where the issue in question "was subject to extensive public scrutiny and discussion during the SEQRA proceedings"). Thus, while the Final Scoping Outline narrowed the issues required to be analyzed in the DSEIS, it did not "contract away SEQRA" or otherwise curtail the substantive issues required to be analyzed under SEQRA because the traditional aspects of the iterative SEQRA process which occur outside of the Part 624 hearing process – such as the response to comments section of an FEIS – can contain the additional analyses and other information.

However, because the analysis of Project alternatives included in the DSEIS complies with the Final Scoping Outline, and none of the petitioners now claiming that the analysis of alternatives in the DSEIS is inadequate commented that such analysis should be included in the DSEIS either during the scoping process or after the scoping process (pursuant to the procedures set forth in Section 617.8(g)), those petitioners cannot now seek to adjudicate the sufficiency of the DSEIS on those grounds. The regulations clearly grant Finger Lakes LPG Storage the "discretion" to exclude from the DSEIS any issues not included in the Final Scoping Outline and to instead treat that information as public comments on the DSEIS. 6 NYCRR § 617.8(g, h). To allow petitioners to seek adjudication of the sufficiency of the DSEIS on grounds that they never raised during scoping would render the "discretion" granted to Finger Lakes LPG Storage by the scoping regulations completely illusory and leave subsections (g) and (h) meaningless nullities.

NYSDEC OHMS Document No. 201166576-00038

Moreover, under such an indefensible interpretation of the SEQRA regulations, a project opponent would never be incentivized to take part in scoping but would instead wait to attack the DEIS during permit hearing procedures under Part 624 since there would be no repercussions to ignoring the scoping process.

The only way to harmonize and reconcile the substantive requirements of SEQRA under Section 617.11, Section 624.4(c)(6)(i)(b) of the Department's permit hearing regulations, and the scoping regulations under Section 617.8(g, h) is to hold that because petitioners did not comment during the scoping process that particular Project alternatives should be included in the DSEIS, those petitioners are precluded from seeking to adjudicate the sufficiency of the DSEIS on those grounds – and petitioners' submissions must be treated as comments on the DSEIS under Section 617.8(h).[41]

The analysis of Project alternatives included in the DSEIS was consistent with the requirements of the Final Scoping Outline and thus complied with SEQRA.

2. Petitioners' Arguments that the DSEIS was Required to Evaluate Certain Site Alternatives or the Potential Elimination of Truck Deliveries are Inconsistent with the SEQRA Regulations.

Petitioners' arguments that the DSEIS is inadequate because it does not evaluate "alternative sites" or the potential elimination of truck deliveries are inconsistent with the SEQRA regulations.[42]

Notwithstanding that the Final Scoping Outline limited alternative sites to be evaluated to those controlled by Finger Lakes LPG Storage in the "general project area," some petitioners

[41] Contrary to Seneca Lake Communities' attempted reliance on the ALJ's 2001 ruling in St. Lawrence Cement, Finger Lakes LPG Storage is not arguing that a petitioner is precluded from "addressing matters in their petition that they failed to raise in the scoping process." (Tr. at 448-449 (citing St. Lawrence Cement Co., LLC, Initial Rulings of the ALJ on Party Status and Issues, 2001 N.Y. ENV LEXIS 50, at *150 (NYSDEC 2001))). Petitioners are of course free to "address" whatever issues they like in their party status petitions, but they cannot seek to adjudicate the sufficiency of the DSEIS on grounds they failed to raise during the scoping process.

[42] Seneca Lake Communities petition, pp. 21-22; Gas Free Seneca petition, pp. 21-23.

NYSDEC OHMS Document No. 201166576-00038

argue that the DSEIS should have evaluated a litany of alternative sites, including sites in New Jersey, Pennsylvania, and every state in New England.[43] The assertion that the DSEIS must evaluate alternative sites for the Project in other states ignores the rule that the DSEIS must only consider "reasonable alternatives" that are consistent with the "objectives and capabilities of the project sponsor." 6 NYCRR § 617.9(b)(5)(v). The objective of the Project is using existing caverns as storage to benefit New York consumers could not be achieved by moving the Project to other states.[44] And, as noted by Department staff during the issues conference, creating an entirely new underground storage facility from scratch – as opposed to utilizing the existing salt caverns – would not be an environmentally sound or "reasonable alternative." Id.; (Tr. at 483-486.) For example, with respect to brine disposal, which is one of the more prominent topics associated with creating salt cavern storage facilities, Department staff explained the environmental advantages of the currently proposed Project location:

> We knew about the [Savona alternative] site and we knew about how it worked and what its parameters were. And it doesn't have a salt plant. So the brine disposal there is limited. The caverns that are already there, there are some caverns that are storing gas and some caverns that are being expanded in accordance with the department permit. And the brine disposal that results from that is going on under a SPDES permit, but it's not that fast. And they don't have a salt plant so we didn't see it as kind of a reasonable alternative. In fact we saw it as the salt plant at US Salt was actually an advantage. The cavern is already being done at the US Salt site. So you don't have to solution out the caverns or anything like that. So you don't have that kind of brine disposal.

(Tr. at 483-484.)

One petitioner also argues that a further supplement to the DSEIS for the Project must be prepared because Finger Lakes LPG Storage recently submitted a revised Product Transportation Allocation indicating that, based on market forecasts, the company would not expect to receive or deliver any propane or butane by truck if the Project were operational today, which (in

[43] Seneca Lake Communities petition, pp. 21-22.
[44] DSEIS §§ 2.1, 3.3.

NYSDEC OHMS Document No. 201166576-00038

petitioner's view) amounts to an unevaluated alternative to the Project.[45] The potential elimination of truck deliveries is a Project mitigation measure, the evaluation of which is encouraged under SEQRA. See 6 NYCRR § 617.11(d)(5). Requiring the evaluation of every potential mitigation measure as an alternative project design would not only discourage the proposal of mitigation measures (in violation of SEQRA) but would also only conflate the clear regulatory distinction between the two concepts. See, e.g., 6 NYCRR §§ 617.9(b)(5)(iv, v) (DEIS must contain "a description of the mitigation measures" and "a description and evaluation of the range of reasonable alternatives"); Merson v. McNally, 90 N.Y.2d 742, 751 (1997) (consideration of mitigation measures, which is encouraged under SEQRA, should not be used to needlessly prolong SEQRA review).

In addition, petitioner's erroneous argument that the potential elimination of truck delivering requires supplementation of the DSEIS ignores the controlling law on when a supplement to an EIS must be prepared. It is well established that a supplemental EIS may only be required when "specific significant adverse environmental impacts" are not addressed or inadequately addressed in an EIS that arise from changes proposed to a project, newly discovered information, or a change in circumstances related to the project. Riverkeeper, Inc. v. Planning Bd. of Town of Southeast, 9 N.Y.3d 219, 231 (2007) (citing 6 NYCRR § 617.9(a)(7)). Petitioner ignores this operative standard for requiring a supplement to the DSEIS and cannot explain how the submission of the revised Product Transportation Allocation, which would further mitigate impacts, will result in "specific significant adverse environmental impacts" that were not addressed or inadequately addressed in the DSEIS. See Riverkeeper, 9 N.Y.3d at 231. Because petitioner has not identified any "specific significant adverse environmental impacts"

[45] Gas Free Seneca petition at 18-19, 21-22.

NYSDEC OHMS Document No. 201166576-00038

resulting from the revised Product Transportation Allocation, no supplementation of the DSEIS is required.

V. The DSEIS Was Not Required to Analyze the Project's Purported Cumulative Impacts

One petitioner argues that the DSEIS does not comply with SEQRA because it does not evaluate the Project's "potential cumulative impacts" in conjunction with the impacts of the nearby Arlington Storage Company natural gas storage project ("Arlington Facility").[46] Petitioner's argument is legally and factually erroneous in multiple respects and must be rejected.

A. Petitioner Has Not Alleged – and Cannot Show – that the Environmental Impacts of the Project and the Arlington Facility Will Accumulate to Have a Significant Effect on a Common Resource

Under SEQRA, a "draft EIS should identify and discuss" cumulative impacts "only where applicable and significant." 6 NYCRR § 617.9(b)(5)(iii)([a]) (emphasis supplied). "Cumulative impacts occur when multiple actions affect the same resource(s)." SEQRA Handbook at 81; see also, e.g., Kathleen Wilson, Decision of the Acting Commissioner, 2010 N.Y. ENV LEXIS 74, at *6 (NYSDEC 2010) (finding cumulative impacts because projects "would impair the natural resources of the river corridor"). A cumulative impacts assessment is only necessary when multiple actions will "take place simultaneously or sequentially in a way that the combined impacts may be significant." Id.; see Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at *87 ("when analyzing cumulative impacts under SEQRA, some nexus should exist between the matters to be considered together, and the combined impact must have the potential for a significant environmental impact"). "[A]ssessment of cumulative impacts should be limited to consideration of probable impacts, not speculative ones." SEQRA Handbook at 81.

[46] Gas Free Seneca petition at 19-20.

NYSDEC OHMS Document No. 201166576-00038

As with any proposed issue, the burden is on the petitioner to present a "factual foundation" for its cumulative impact assertions. See Buffalo Crushed Stone, 2008 N.Y. ENV LEXIS 69, at *12.

Here, petitioner has failed to meet its burden of establishing any factual foundation for its assertion that the Project and the Arlington Facility will result in significant cumulative impacts. Petitioner has not alleged – much less shown – that the environmental impacts of the Project and the potential Arlington Facility will affect any identified common resource, or that the combined impacts on any common resource will rise to the level of significance. See SEQRA Handbook at 81. Petitioner never even identifies any particular environmental resource (e.g., traffic, air, water) that will allegedly be impacted by both facilities but instead asserts in a vague and conclusory fashion that the Arlington Facility "would affect the same environmental resources and communities as the Project."[47] Without having identified any common resource that would be impacted by both the Project and the Arlington Facility, petitioner also fails to provide any factual basis for concluding that the cumulative impacts of the Project and the Arlington Facility on those unidentified resources would rise to the level of significance.

Instead of identifying any specific environmental resource that would be impacted by the Project and the Arlington Facility, or providing an offer of proof that the cumulative impacts of the two facilities on some resource would rise to the level of significance, during the issues conference petitioner merely made unsubstantiated and broad assertions regarding cumulative impacts: "These two facilities will have an important and fairly obvious potential cumulative impact that has not been addressed in the [DSEIS] or elsewhere." (Tr. at 536.) This bald statement even fails to identify an area of environmental concern such as air, water, or land and is likewise not supported by any offer of proof of any kind let alone one with such information.

[47] Gas Free Seneca petition, p. 20.

Petitioner essentially conceded during the issues conference that it was not submitting any offer of proof on the Project's alleged cumulative impacts but was instead "simply making a legal argument that cumulative impacts was not analyzed." (Tr. at 570-571.) Petitioner argued that a cumulative impacts analysis of the Project and the Arlington Facility is mandated by Save the Pine Bush, Inc. v. City of Albany, 70 N.Y.2d 193, 205-206 (1987). In Save the Pine Bush, the Court held that cumulative impacts must be analyzed when a project is "part of a larger plan." 70 N.Y.2d at 206. Although petitioner alleges that the Project and the Arlington Facility "are part of the same overall plan by Crestwood to create a natural gas storage hub in the northeast," petitioner has not proffered any record evidence in support of that false assertion. Neither Finger Lakes LPG Storage nor an affiliated entity has ever stated that the Project would be part of "natural gas storage hub" for numerous reasons. The Project will store LPG *not* natural gas, and the LPG and natural gas markets are totally separate and independent, with different regulatory constructs, different consumer bases, and different infrastructures to move product to markets. To suggest that an LPG storage facility like the Project is part of a plan to "create a natural gas storage hub" is simply nonsensical. Record support is required to conclude that two projects are part of same development plan – bald assertions without any factual basis are insufficient. See Brooklyn Bridge Park Legal Defense Fund, Inc. v. NYS Urban Development Corp., 14 Misc. 3d 515, 526 (Sup. Ct. Kings Cty. 2006), aff'd, 50 A.D.3d 1029 (2d Dep't 2008); Buffalo Crushed Stone, 2008 N.Y. ENV LEXIS 69, at *12, 17 ("conclusory or speculative statements without a factual foundation are not sufficient to raise an adjudicable issue," and "mere expressions" of "opinions without substantiation are insufficient to establish that an issue is substantive and significant"). Without any evidence supporting petitioner's theory that the Project and the Arlington Facility are part of a common plan "to create a natural

NYSDEC OHMS Document No. 201166576-00038

gas storage hub in the northeast," petitioner's cumulative impact arguments are primarily based on the fact that the two facilities will be located on adjacent pieces of property or that the two facilities have common upstream ownership interests. (Tr. at 536-537.) However, it has been repeatedly held that mere geographic proximity between two projects or common ownership interests does not necessitate a cumulative impacts analysis. See Long Island Pine Barrens Society v. Planning Bd. of Town of Brookhaven, 80 N.Y.2d 500, 514 (1992) (holding that cumulative impacts analysis of multiple project not required where only common element was geographic location); Halperin v. City of New Rochelle, 24 A.D.3d 768, 776 (2d Dep't 2005) ("the Zoning Board was not required to analyze so-called cumulative impacts of the proposed project in connection with other planned or anticipated development or use of land in the vicinity of the subject property"); Village of Tarrytown v. Planning Bd. of Village of Sleepy Hollow, 292 A.D.2d 617, 618, 621 (2d Dep't 2002) (cumulative impacts of development of six parcels under common ownership not required because no common development plan existed).

A cumulative impacts analysis is not mandatory under SEQRA (and, as discussed below, it was not mandated by the Final Scoping Outline), and given the failure by petitioner to substantiate its cumulative impacts argument with any specifics or factual foundation, petitioner has not offered any basis for concluding that the impacts of the Project and the Arlington Facility on a common resource will accumulate to a level where, when combined, the effects on that resource will be significant. See SEQRA Handbook at 81; Crossroads Ventures, 2006 N.Y. ENV LEXIS 88, at 86-89. Petitioner does not even attempt to satisfy this standard, which is a prerequisite to mandating a cumulative impact analysis in the DSEIS for the Project.

NYSDEC OHMS Document No. 201166576-00038

B. The Final Scoping Outline Did Not Require the DSEIS for the Project Include a Cumulative Impacts Assessment

As noted above, SEQRA only requires a DEIS to discuss cumulative impacts "where applicable and significant." 6 NYCRR § 617.9(b)(5)(iii)([a]). Petitioner has provided no basis to conclude that Project will have any significant cumulative impacts (as discussed above), and the Final Scoping Outline for the Project further established the inapplicability of a cumulative impacts analysis to the Project.

As previously noted, the purpose of the Final Scoping Outline for the DSEIS issued by the Department on February 15, 2011, was to "focus the EIS on potentially significant adverse impacts and to eliminate consideration of those impacts that are irrelevant or nonsignificant." 6 NYCRR § 617.8(a). Finger Lakes LPG Storage was not required to incorporate analysis of issues into the DSEIS that were not included in the Final Scoping Outline. 6 NYCRR § 617.8(h). The Final Scoping Outline for the DSEIS does not mention "cumulative impacts," and (as noted) analysis of cumulative impacts is not mandatory under SEQRA. 6 NYCRR § 617.9(b)(5)(iii)([a]). And neither petitioner nor anyone else raised this issue of cumulative impacts of the Project and the Arlington Facility during the scoping process (or even thereafter prior to filing its petition for party status). (Tr. at 562-563.) As discussed above in Section IV.B, petitioner's failure to raise its cumulative impact contentions during the scoping process precludes it from now attempting to adjudicate the sufficiency of the DSEIS on that basis.

Accordingly, no cumulative impacts exist relative to the Project and, in all events, the DSEIS was not required to include an evaluation of the Project's alleged cumulative impacts.

NYSDEC OHMS Document No. 201166576-00038

C. FERC and the Department Correctly Concluded that the Project and the Arlington Facility Would Not Result in Any Significant Cumulative Impacts

The precise issue raised by petitioner – whether the Project and the Arlington Facility will result in any significant cumulative impacts – has already been comprehensively examined by the Federal Energy Regulatory Commission ("FERC") under the National Environmental Policy Act ("NEPA"). After conducting what Department staff characterized as "a very robust cumulative analysis" (Tr. at 561), FERC concluded that the Project and the Arlington Facility would not result in any significant cumulative impacts and issued a finding of no significant impact ("FONSI," the equivalent of a negative declaration under SEQRA). While that determination does not automatically constitute compliance with SEQRA, the Department may use FERC's NEPA review of the cumulative impacts issues "as support for their required determinations or findings under SEQR." SEQRA Handbook at 188-189; see 6 NYCRR § 617.15(b) (a FONSI issued under NEPA does not "automatically constitute compliance with SEQR"). FERC's finding that the Project and the Arlington Facility would not result in any significant cumulative impacts provides further evidence that the DSEIS was not required to include a cumulative impacts section to comply with SEQRA.

FERC conducted an environmental review of the Arlington Facility pursuant to NEPA, which, unlike SEQRA, "requires agencies to consider the cumulative impacts of all actions." San Luis & Delta-Mendota Water Auth. v. Jewell, 747 F.3d 581, 650 (9th Cir. 2014). On May 15, 2014, FERC issued an order granting an authorization for the expansion of the Arlington Facility, which is referred to in that order as the "Gallery 2 Project." Arlington Storage Company, LLC, 147 FERC ¶ 61,120 (2014) ("FERC Order"). As required by NEPA, the FERC Order incorporates a comprehensive environmental review of the Arlington Facility (based on a separate Environmental Assessment ("EA") document), including an analysis of whether the

Arlington Facility and the Project (referred to as the "Finger Lakes Project" in the FERC Order) will result in any significant cumulative impacts. 147 FERC ¶ 61,120 at PP 60-76[48]. The Department cooperated with FERC in preparing the environmental analysis of the Arlington Facility. (Tr. at 555-556.)

As stated in the FERC Order, the "proposed Gallery 2 Project, along with the Finger Lakes Project, was analyzed in the EA for potential cumulative impacts on groundwater, surface water resources, and air quality." 147 FERC ¶ 61,120 at P 61. During the issues conference, petitioner asserted, as it did when it participated in the FERC proceeding, that FERC's analysis of the potential cumulative impacts of the Project and the Arlington Facility was inadequate because it was allegedly "limited to groundwater, surface water and air quality impacts." (Tr. at 540.) But Department staff stated during the issues conference that they worked with FERC on evaluating cumulative impacts related to cavern integrity and noise as well. (Tr. at 555-556, 561.) And the scope of the cumulative impacts analysis in the EA that FERC relied upon in making its findings is addressed in paragraph 62 of the FERC Order:

> Gas Free Seneca also comments that the EA ignores cumulative impact on aesthetics, noise and community character focusing solely on groundwater, surface water and air quality. However, due to the limited scope and impacts of the Gallery 2 Project, groundwater, surface-water quality, and cumulative air impacts were the only resources identified in the EA that could potentially be cumulatively affected (i.e., there will be no impacts on, for example, fisheries, wildlife, or threatened and endangered species).

It is also clear from the FERC Order that petitioner failed in that proceeding (as they did here) to introduce any evidence that the Arlington Facility and the Project would result in any significant cumulative impacts:

> The EA concludes that there would be negligible cumulative impacts on groundwater or surface water…. Because no project-specific evidence has been

[48] While the FERC Order is a publicly available decision, for convenience, a copy from the official reporter is attached as **Exhibit 1**.

NYSDEC OHMS Document No. 201166576-00038

> provided to sufficiently call into question the adequacy of the EA's cumulative impact analysis, we concur that the construction and operation of Arlington's Gallery 2 Project and the Finger Lakes Project will not have cumulative impacts on groundwater and surface waters.

147 FERC ¶ 61,120 at P 63. FERC also concluded that the Arlington Facility and the Project "will not result in significant cumulative impacts on regional air quality," either during construction or operation. 147 FERC ¶ 61,120 at PP 66, 69.

FERC, with the cooperation of the Department and after conducting a "very robust" analysis, concluded that the Project and the Arlington Facility would not result in any significant cumulative effects. FERC's conclusion, which can be relied upon the Department as support for determinations and findings required under SEQRA, provides further evidence that the DSEIS complies with SEQRA and petitioner's cumulative impacts arguments do not raise an adjudicable issue.

VI. Petitioners' Objections to the Indemnification Provisions of Draft Permit Condition 9 Cannot be Adjudicated

Petitioners object to the indemnification provisions of Draft Permit Condition 9, which reads as follows:

> 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 the law for such actions. The Permittee must indemnify and save harmless the State for suits, actions, damages, and costs of every nature and description resulting from such actions.

In their party status petitions, petitioners object to Condition 9 on two bases: (1) Condition 9 is ambiguous and requires modification or clarification; and (2) Condition 9 does not offer adequate economic protection in the event of a catastrophic event at the Project (e.g., "a spill,

accident, cavern failure, or other catastrophic event").[49] Then during the issues conference, petitioners modified their argument to assert that the inadequate economic protection afforded by Condition 9 could hypothetically result in "unmitigated" environmental water quality impacts in violation of SEQRA in the event of a catastrophic event at the Project. All of petitioners' arguments regarding Condition 9 lack merit. First, petitioners cannot cite to any specific regulatory or statutory provision that Condition 9 violates, and their proposal to replace Condition 9 with "an ex ante solution" of a bond requirement for the subject underground storage permit has no statutory or legal basis and is thus ultra vires. Second, petitioners' arguments that Condition 9 fails to offer adequate economic protection are predicated on a hypothetical catastrophic event resulting in speculative economic impacts, which are beyond the scope of SEQRA and not adjudicable. Finally, petitioners' belated and untimely claim that Condition 9 would result in unmitigated environmental impacts is belied by the affidavit of their own witness, which demonstrates that the alleged impacts supposedly unmitigated by Condition 9 are ultimately economic in nature, and thus beyond the scope of SEQRA.

A. Condition 9 Does Not Violate Any Statutory or Regulatory Provision, and There is No Statutory or Legal Basis of Imposing a Bonding Requirement to Obtain an Underground Storage Permit

Finger Lakes LPG Storage understands that the indemnification provisions of Condition 9 are entirely consistent with the obligations imposed by the Department on operators of other underground hydrocarbon storage facilities in the state. Despite this fact, petitioners argue that Condition 9 "is either unreasonably ambiguous and/or inadequate to mitigate potential significant adverse impacts from the Project." (Tr. at 574-575.) But in both their written petitions and under repeated questioning from the Chief ALJ during the issues conference,

[49] Seneca Lake Communities petition, p. 22-24; Wine Business Coalition petition, pp. 19-20.

petitioners have been unable to identify any specific statutory or regulatory provision that Condition 9 allegedly violates – meaning that petitioners' criticism of the wording of Condition 9 fails to raise a substantive issue for adjudication. See 6 NYCRR § 624.4(c)(2) (defining an issue as "substantive if there is sufficient doubt about the applicant's ability to meet statutory or regulatory criteria applicable to the project") (Tr. at 576).

In their petitions and again during the issues conference, petitioners suggested that the Department could use its general authority under Article 23 of the ECL to replace Condition 9 with "an ex ante solution," which would require Finger Lakes LPG Storage to post a bond or other financial assurance as a condition to obtaining an underground storage permit for the Project.[50] As the Chief ALJ observed during the issues conference, however, while Article 23 contains several express provisions empowering the Department to impose bonding or surety requirements, no such requirements are included in Section 23-1301, which governs Finger Lakes LPG Storage's current application for an underground storage permit for the Project. E.g., ECL §§ 23-0305(8)(e, k), (14)(f); 23-1101(3)(e). Because Article 23 describes particular situations where posting of a bond or financial assurance is required (e.g., Sections 23-0305 or 23-1101), and Section 23-1301 has no such requirement, an irrefutable inference must be drawn that a bond or financial assurance cannot be a prerequisite to obtaining an underground storage permit. See Preferred Mut. Ins. Co. v. State, 196 A.D.2d 384, 385 (3d Dep't 1994) ("It is a fundamental tenet of statutory construction that where a 'statute describes the particular situations in which it is to apply, "an irrefutable inference must be drawn that what is omitted or not included was intended to be omitted or excluded."'").

[50] Seneca Lake Communities petition, p. 24; Tr. 578, 582.

B. Petitioners' Arguments that Condition 9 Fails to Offer Adequate Economic Protections Are Predicated on a Hypothetical Catastrophic Event Resulting in Speculative Economic Impacts, Which Are Beyond the Scope of SEQRA and Not Adjudicable

Unable to cite to any specific statutory or regulatory provision that the wording of Condition 9 violates, petitioners next claim that Condition 9 "is being proposed as mitigation… for significant adverse impacts and this is also an issue under SEQRA" because Condition 9 is inadequate to "mitigate the potential economic catastrophe" that could result from the Project. (Tr. at 577, 583, 586.) Similarly, petitioners advanced the inventive theory that SEQRA empowers the Department to evaluate Finger Lakes LPG Storage's finances to determine the company's capacity to address a hypothetical "catastrophe" resulting from the Project. (Tr. at 584-585.) As stated in one petition:

> Condition 9 does not protect the Seneca Lake Communities or other nearby municipalities threatened by the Proposed Project, particularly in the event of a catastrophic accident. As discussed above, a spill, accident, cavern failure, or other catastrophic event would likely severely tax the emergency resources of the Communities. Further, the costs of replacing or supplementing water treatment systems could run into the millions of dollar for each affected facilities, not counting normal operating costs afterward and the costs of providing temporary potable water before new treatment comes online….
>
> However, Condition 9 appears only to indemnify the State, and even then only from liability and costs related to damages caused by the Project. It provides no evident protection for the Communities or other impacted municipalities in the event of an accident, apparently leaving them to seek recompense through a costly, time-consuming lawsuit.[51]

Petitioners' arguments notwithstanding, it is well-established that economic impacts are "beyond the scope of SEQRA" and "purely economic impacts are not adjudicable." Sun Co. Inc. v. City of Syracuse Industrial Development Agency, 209 A.D.2d 34, 50 (4th Dep't 1995); St. Lawrence Cement, 2001 N.Y. ENV LEXIS 50, at *334-335. While petitioners assert that

[51] Seneca Lake Communities petition, p. 23-24.

NYSDEC OHMS Document No. 201166576-00038

Condition 9 violates SEQRA by either failing to provide adequate financial "protection" to the petitioners and/or failing to mitigate the financial impacts of the Project in the event of a catastrophe, all of the hypothetical impacts underlying petitioners' arguments are economic in nature – and thus clearly beyond the scope of SEQRA. And the presence of a purely economic and non-environmental condition in the draft permit does not alter the fact that "purely economic impacts" like those addressed in the Condition 9 are beyond SEQRA's scope. Sun Co., 209 A.D.2d at 50; St. Lawrence Cement, 2001 N.Y. ENV LEXIS 50, at *334-335. Moreover, even if petitioners' contentions could be read as containing impacts within the scope of SEQRA, their assertions regarding the alleged insufficiency of the economic protection afforded by Condition 9 are each premised on a hypothetical and speculative future catastrophe, and the law is clear that SEQRA agencies may "ignore speculative environmental consequences" like those upon which petitioners' arguments are based. See Industrial Liaison Committee of the Niagara Falls Area Chamber of Commerce v. Williams, 72 N.Y.2d 137, 143 (1988). Any actual environmental impacts that may result from construction and operation of the Project are analyzed in the DSEIS.

C. Petitioners' Claimed "Unmitigated" Environmental Impacts Resulting from the Allegedly Inadequate Protection Afforded by Condition 9 are Ultimately Economic in Nature and Thus Beyond the Scope of SEQRA and Not Adjudicable

During the issues conference, and in an apparent effort to provide a non-economic basis to their objections to Condition 9, petitioners claimed that the allegedly inadequate economic protection afforded by Condition 9 could theoretically result in "unmitigated" environmental water quality impacts in violation of SEQRA:

> …if in fact the Department does not have the authority to impose a bond or to otherwise require indemnification for parties beyond the State, then what you have here is a significant, if an unmitigated significant adverse environmental

NYSDEC OHMS Document No. 201166576-00038

> impact under SEQRA that itself may mandate denial of the permit if it can't be mitigated through some kind of financial surety….
>
> This is not an economic argument. It's not an attenuated environmental impact we're talking about. It's a direct environmental impact. And if as testified to by [Mr. Kuprewicz] and the representatives of the Seneca Lake Communities there is an inability to address the immediate or long-term environmental impact of a catastrophic failure or a slow, long-term leaching of salt into the lake. That's an environmental impact and it relates to water quality and drinking water quality and public safety and those are environmental impacts that are within the purview of SEQRA. And if those can't be mitigated because the Applicant does not have the financial wherewithal to adequately address those short and long-term impacts, it's an unmitigated impact.

(Tr. 604-606.) Petitioners' argument that the alleged economic impacts of Condition 9 could ultimately result in environmental impacts is contradicted by the affidavit of one of petitioners' own witnesses, Geneva City Manager Mathew Horn (Attachment G to the Seneca Lake Communities petition).

According to Mr. Horn, if the Project were to hypothetically result in a "salinity spike" in Seneca Lake, the City of Geneva would need to adapt its water treatment system, and those "adaptations would significantly increase the cost of providing water to City residents." (Horn Aff. ¶¶ 7-8.) Because it could take more than a year to implement these adaptations, Mr. Horn states:

> …if the Proposed Project is permitted, I would recommend that the City of Geneva begin designing and permitting a reverse osmosis desalination solution so that the project could effectively begin construction at a moment's notice. The City should explore solutions to deliver water on a temporary basis to support residential, industrial, and commercial needs. Undertaking either option would present a substantial cost to City taxpayers.

(Horn Aff. ¶ 10) (emphasis added). Thus, even under the speculative scenario underlying petitioners' entire argument, the theoretical impacts are economic and not environmental inasmuch as the city would continue to deliver potable drinking water to its residents and businesses, albeit supposedly at increased cost. Even in this extraordinarily unlikely event, the

NYSDEC OHMS Document No. 201166576-00038

economic impacts would be mitigated by the city's ability to seek full recompense under tort law. Thus, these alleged impacts of the inadequacy of Condition 9 are neither environmental nor unmitigated.

Because the allegedly "unmitigated" impacts resulting from the alleged shortcomings of Condition 9 are clearly economic and not environmental in nature, they are beyond the scope of SEQRA. Sun Co., 209 A.D.2d at 50; St. Lawrence Cement, 2001 N.Y. ENV LEXIS 50, at *334-335. And such alleged impacts would not be "unmitigated" as a factual matter in any event, as conceded by petitioners own offer of proof on the topic. Accordingly, petitioners' objections to Condition 9 are not adjudicable.

VII. The Record Demonstrates that the Proposed Caverns Have Integrity and There is No Adjudicable Issue

A. Introduction

As stated in Section II of this Memorandum, *supra*, petitioners' burden of persuasion includes making an offer of proof such that there is sufficient doubt about the Applicant's ability to meet statutory and regulatory criteria. In the context of an underground gas storage project, that criteria is set forth in ECL § 23-1301(1), which provides:

> No underground reservoir shall be devoted to the storage of gas, or liquefied petroleum gas unless the prospective operator of such storage reservoir shall have received from the department, after approval in writing of the state geologist, an underground storage permit which shall be in full force. The application for said permit shall include the following:
>
> 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 the storage purposes.

While there are no regulations in furtherance of this statutory criteria regarding underground storage, the subject of the underground storage of gas was significantly reviewed as

NYSDEC OHMS Document No. 201166576-00038

part of the Department's 1992 Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program ("FGEIS"). It is clear, based on the Application documents, the expert reports submitted by the Applicant, the issues conference record, the DEC draft permit,[52] State Geologist approval, and FERC's analysis of the geological formation and cavern integrity (in the context of nearby Arlington Gallery 2) that the Applicant has provided sufficient data to show that its proposed galleries are "adaptable for storage purposes." Nothing raised by petitioners in either their petitions or at the issues conference provides a factual or scientific foundation to raise sufficient doubt or to otherwise challenge this overwhelming and validly supported conclusion. Even if such a foundation could be found in the contentions proffered by petitioners, it has been rebutted by the submissions of the Applicant and Department staff, whose submissions are "important considerations" in the determination of whether a substantive and significant issue has been established.

B. The Application and the Geologic Evaluation Conducted Demonstrates Cavern Integrity

A review of the Application documents, including the voluminous credible scientific and geological data leads to the inescapable conclusion that the caverns proposed for storage have integrity and therefore satisfy the test set forth in ECL § 23-1301(1) as to when an underground storage permit can be issued by the Department. Finger Lakes LPG Storage assessed the potential for failure of the storage facility by product leakage from the wells, leakage through the geologic strata surrounding the caverns, catastrophic failure of the caverns and well bores from cavern collapse, and the leakage or failure of the barrier pillars between the Finger Lakes LPG Storage galleries and neighboring galleries that are not part of the proposed Project. After

[52] SLPWA's critique of the draft permit is illusory. The only critique given (Tr. at 223) is that it is insufficient because it allows the Project to go forward.

conducting this review, it can only be concluded that LPG can be stored successfully and safely at Finger Lakes LPG Storage Gallery 1 and 2. This conclusion is not just based on the historic fact that gas storage has been successfully conducted in adjacent caverns for decades, but is based on a review by Finger Lakes LPG Storage's qualified and experienced experts, Department staff, the New York State Geologist and FERC staff (in the Arlington Storage proceeding) of the following information:

- Pressure tests run in all five existing wells (58, 33, 34, 43, and 44) that show that none of these wells leak (Document I.A.2, Reservoir Suitability Report, submitted with original Application in October 2009 ["Original RSR"], Exhibit7 and Document I.A.5, Reservoir Suitability Report, May 2010 ("Updated RSR"], Exhibit 12);

- Geophysical logging of Well 58 that shows it to have integrity and has shown that it can be used for storage purposes for Gallery 2 (Document I.A.2, Original RSR, Exhibits 8 and 9; Document I.A.5, Updated RSR, Exhibit 5);

- The geologic strata (interbedded layers of salt, shale and dolomitic shale) that demonstrates low permeabilities that limits fluid movement;

- The faults and fractures that have been documented within the strata surrounding the caverns have been healed by salt and calcite (Document I.A.5, Updated RSR, Section 3, pp. 2-3 and Section 7, pp. 9-11);

- The cavern associated with wells 34, 43 and 44 have stable roofs that are domed and capped by salt (Document I.A.5, Updated RSR, Section 7.3, pp. 11-12 and Section 8, pp. 12-14);

- Well 33 has a curved roof that is capped by dolomitic shale of the Camillus Formation, and Well 58 has a flat-topped roof that is also capped by the Camillus Formation (See, e.g., Document I.A.5, Updated RSR, Exhibit 7);

- The core data at Well 58 that shows that the Camillus Formation has an excellent rock quality and that the fractures in the Camillus are healed by salt and calcite (Document I.A.5, Updated RSR, Exhibit 5).

- Mechanical integrity modeling using finite element analyses has shown that the Finger Lake galleries will be mechanically stable (Document I.A.5, Updated RSR, Exhibit 19);

- The history of successful use of the neighboring galleries for LPG and natural gas storage within the same geological conditions confirms that catastrophic structural

failures of the caverns and associated wells are not likely (Document I.A.2, Section 4);

- A mechanical integrity evaluation shows that the inter-cavern pillar between Gallery 1 and Gallery 10 will be stable during LPG storage (See Finite Element Analysis model [discussed below], Document I.A.5, Updated RSR, Exhibit 20 and Document I.A.8, Exhibit C);

- The required (in the permit) cavern pressure monitoring, subsidence monitoring, MITs, down-hole geophysical logging and sonar surveys will provide a warning of unstable conditions or a potential for catastrophic failure of the cavern or wells (Issues Conference Exhibit 12); and

- The use of bedded salt for hydrocarbon storage has been occurring successfully in North America since the early 1900s and has been applied successfully in the site area for 50 years (Document I.A.2, Section 4).

See also Report of Dr. Samuel Gowan, Assessment of the Technical Suitability of Finger Lakes Galleries 1 and 2 for the Storage of Liquid Petroleum Gas (LPG), February 9, 2015 (attachment 2 of Pre-Issues Conference submission of Finger Lakes LPG Storage)("Gowan Report"), pp. 1-2.

The Finite Element Analysis ("FEA") in particular was performed to assess the stability conditions of the 34/44 LPG storage gallery (Finger Lakes LPG Storage Gallery 1), gallery 10, well 58 (Finger Lakes LPG Storage Gallery 2) and caverns 33 and 43 at the Finger Lakes LPG Storage facility. Laboratory and geological test data from the same geologic formation were used to determine the mechanical and rheological properties of the Syracuse salt and the overburden rocks. See, e.g. Document I.A.2, Exhibits 8 and 9.

Two finite element models were developed to represent a vertical and a horizontal cross section of the studied galleries and caverns in relation to the site geology. Conservative cavern geometry and boundary conditions were imposed. The analyses were performed to simulate the mechanical behavior of the surrounding salt under three extreme internal pressures through the next 50 years. These cases include (1) constant hydrostatic pressure of brine, (2) the mechanical

integrity test (MIT) hydrostatic pressure (about 80% of the in-situ stress at casing shoe), and (3) the minimum LPG pressure with zero wellhead pressure. Document I.A.8, Exhibit C, p. 1.

The major conclusions of the FEA model were as follows:

- The inter-cavern pillars between caverns 33 and 43, 34/44 LPG gallery and gallery 10 will be mechanically stable under the minimum LPG storage pressure of 1,197 psi at the casing shoe for the next 50 years.
- The inter-cavern pillars will be mechanically stable under the MIT hydrostatic pressure of 1,680 psi at the casing shoe for the next 50 years. The MIT pressure is lower than the predicted pillar stresses.
- Leakage or communication between galleries and caverns under the MIT and minimum pressures is very unlikely.
- The impact of the pressure cycle is very small due to the small difference between the magnitudes of the maximum and minimum storage pressures of the LPG.
- The salt pillars have been subjected to large shear strains during brine storage/production. These strains are however significantly reduced by the increase of the confining pressures in the salt pillars when the caverns/galleries are under MIT pressure and LPG storage.
- Both Well 58 (far away and not on FEA map, and [Arlington] Galleries 1 and 2 natural gas storage service) are also too far away to have any effect on the Finger Lakes LPG storage caverns.
- Based on the results of the analyses on these large galleries with small inter-cavern pillars, Well 58 (in the same salt formation/properties/depth) is likely to be mechanically stable. This is because it is relatively small and isolated from the rest of the caverns and galleries (the inter-cavern pillar is over 1000 ft).
- Well 33 will not increase in diameter if and when it is put into LPG storage service since any 30% increase in solution mining by undersaturated brine product displacement will take place above the existing maximum diameter.
- Wells 43, 34, and 44 will be monitoring wells and will not be solution mined, i.e., those wells have no effect on the modeling.

Document I.A.8, Exhibit C, pp. 1-2.

Department staff required the FEA be performed as a way to establish how the cavern is actually going to behave over the life of the facility. (Tr. at 266). The important thing about an

FEA, Department staff observed, was that it is "not strictly a modelling exercise" but evaluates information from well logs, pressure testing, core logs, and cross sections. (Id.)

In order that the issues conference serve a worthwhile function, it is not meant to merely catalogue areas of dispute, but rather make 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. See, e.g., Southwest Brooklyn Marine Transfer Station, Decision of the Commissioner, 2012 N.Y. ENV LEXIS 22, at *11-12 (NYSDEC 2012); Crossroads Ventures, LLC, 2006 N.Y. ENV LEXIS at *8-9, 14; Mirant Bowline, LLC, Interim Decision of the Commissioner, 2001 N.Y. ENV LEXIS 29, at *2-5 (NYSDEC 2001); Bonded Concrete, Inc., Interim Decision of the Commissioner, 1990 N.Y. ENV LEXIS 44, at *3 (NYSDEC 1990); Matter of Seneca Meadows, Inc., Interim Decision, 2012 N.Y. ENV LEXIS 76, at *7. As discussed in greater detail below in Section VII.E, none of the petitioners' offers of proof provide a scientific or factual foundation to challenge or rebut the testing and scientific data collection and evaluation the Applicant has performed to demonstrate cavern integrity. Department staff, FERC and the New York State Geologist agree.

C. FERC Evaluated the Same Geology and Cavern Integrity Issues and Concluded that the Arlington Galleries can Operate Safely and Will Not Impact Seneca Lake – the Same Conclusions Apply Equally to the Finger Lakes LPG Storage Galleries

The conclusions reached by the Applicant and Department staff regarding cavern integrity of the proposed Finger Lakes LPG Storage Galleries were confirmed by FERC when it reviewed the nearby Arlington project. As noted above, on May 15, 2014, FERC issued an Order authorizing Arlington to expand the Arlington Facility. The proposed expansion to the

Arlington Facility involves the conversion of two interconnected bedded salt caverns (known as "Arlington Gallery 2"), previously used for LPG storage, to natural gas storage. See generally 147 FERC ¶ 61,120 at P 1.

Currently, the Arlington Gallery 2 caverns have five existing wellheads, Cavern Well Nos. 30, 30A, 31, 31A and 45, but Arlington will only use 30A and 31A as injection/withdrawal wells, and Cavern well No. 45 as the observation well for the Arlington Gallery 2 Project. 147 FERC ¶ 61,120 at P 7. Arlington's Gallery 2 is located approximately 575 feet east of Finger Lakes LPG Storage's Gallery 2 (Well 58) and approximately 500 feet south of Finger Lakes LPG Storage Well 33. See Document I.A.32.

In the FERC proceeding, Gas Free Seneca filed comments on the geology of Arlington's caverns similar to those made in its petition for party status here and at the issues conference. These included comments about the age of the caverns and wells, the Jacoby-Dellwig fault and a connection between Gallery 1 and Gallery 2; a cavern roof collapse in Cavern Well No. 30 and the integrity of Gallery 2; and the salt pillar thickness. All of these comments were rejected by FERC. 147 FERC ¶ 61,120 at P 24.

Regarding the Jacoby-Dellwig fault, FERC acknowledged its presence located east of brine Cavern Well Nos. 29, 37 and 41, which puts it west of Arlington Gallery 1 and east of Arlington Gallery 2. FERC also acknowledged that a surface brine flow event occurred while Cavern Well No. 29, located north of the Arlington Galleries and not part of either Gallery, was being constructed because its hydraulic fractures apparently intersected the Jacoby-Dellwig fault. However, FERC noted, natural gas has been stored in Arlington Gallery 1 with no evidence of leaking, and pressure testing results indicated no pressure loss in either Gallery. Further, FERC found neither Gallery intersects with the fault, and any hydraulic fractures created during the

construction of the two Galleries would have long since healed due to the salt's inherent plasticity.[53] In addition, the structure contour map on the top of the salt gives no indications of faults breaking into the overlying sediments. Therefore, FERC found that all evidence indicated faulting is confined to the salt and the intervening rock layers. Based on its analysis of this information, FERC concluded the presence of the Jacoby-Dellwig fault near the Seneca Lake Project does not compromise the integrity of either Gallery. 147 FERC ¶ 61,120 at P 26. This is the same conclusion Finger Lakes LPG Storage and Department staff have reached.

In the Arlington proceeding, Gas Free Seneca also claimed that salt bed caverns found at Arlington Gallery 2 provide a less comprehensive seal when compared to salt-dome cavern integrity, and that this must be considered along with the role of geologic faulting in the site area and within the caverns. However, FERC responded that cavern integrity is evaluated on an individual basis, taking into account, among other things, all geological information, including the type of formation – i.e., bedded salt cavern or salt dome. Based on all the information filed, FERC concluded that "there is no physical reason to conclude that the bedded salt caverns of Gallery 2 do not have a comprehensive integrity." 147 FERC ¶ 61,120 at P 30. FERC found that Arlington's evaluation of well logs, isopach maps and structure maps in the vicinity of Arlington Gallery 2 properly determined that there is no faulting in the Camillus Shale caprock above the proposed storage galleries. FERC found that the geologic literature showed that faulting occurred within the salt mass between over and underlying bedrock units. Moreover, the brine pressure test conducted in Gallery 2 showed no loss, indicating the Gallery has integrity. Id.

[53] As discussed below, FERC's finding here is in direct contradiction to the factually and scientifically unsupported speculative theories espoused by Dr. Vaughan in support of SLPWA's first proposed issue related to the existence and effect of the healing power of salt on the fractures that are known to exist. See SLPWA petition, Attachment C ("Vaughan Report"), ¶ 27, where Dr. Vaughan challenges the view that the salt has enclosed and otherwise embedded any structural damage resulting from faulting of the non-salt features of the geology.

NYSDEC OHMS Document No. 201166576-00038

FERC also evaluated the now well-refuted claim by one of Gas Free Seneca's consultants that there had been development problems in Well No. 58 (i.e., Finger Lakes LPG Storage Gallery 2) due in part to a coincidental seismic event. FERC observed correctly that this previous conclusion was the mistaken opinion of one of U.S. Salt's consulting engineers (Mr. Larry Sevenker), who later, upon learning of a recent (2009) sonar, corrected himself. See Document I.A.23; 147 FERC ¶ 61,120 at P 82. The seismic event cited never was validated and subsequent reentry into Well No. 58 and sonar logging showed that the cavern was intact, and what was originally interpreted as a roof collapse was not.

FERC recognized (as do Finger Lakes LPG Storage and Department staff experts here) Dr. Jacoby's finding that "failure to maintain sufficient pressure [during hydraulic fracturing] results in the 'healing' or closing in of the fractures, and that halite crystallizes in the fractures if sufficient pressure is not maintained until the void is completely filled." 147 FERC ¶ 61,120 at P 89. Indeed, FERC found that "this crystalline halite material is 'substantially stronger' in tension than the original salt, thus resisting refracturing, and that this healing effect allows fractured cavities in faulted salt beds, such as those of New York, to be used for the storage of hydrocarbons." Id. As shown below, the pressures to be utilized during the operation of the Finger Lakes LPG Storage caverns are well below hydraulic fracture pressures.

During Arlington's cavern testing, pressure was applied at the well head and held for an extended period of time while the caverns and wells offset from the caverns were monitored for pressure changes. It was common practice by U.S. Salt to horizontally connect the caverns by hydraulic fracturing. However, as stated above, this was not proposed by Arlington. 147 FERC ¶ 61,120 at P 91. Nor is it proposed by Finger Lakes LPG Storage.

FERC observed that hydraulic fracturing initiation pressures used by U.S. Salt on wells in the Arlington storage field had been in the range of 1.36 psi/foot (ft) to 1.70 psi/ft (2,500 psi to 3,500 psi at the well head) to produce the required fracturing and cavern connection results. FERC found that these pressures are much greater than the pressures at which Arlington would operate the Gallery 2 caverns, which range between 0.2 psi/ft and 0.9 psi/ft (which equates to 400 psi and 1,669 psi at the well head). Importantly, these pressures are also much greater than the pressures Finger Lakes LPG Storage would operate its caverns. See issues conference Exhibit 32. The release of brine fluid from Cavern Well No. 29 was the result of preferential flow during the hydraulic fracturing in this cavern. 147 FERC ¶ 61,120 at P 92. However, given the proposed operational pressures at Arlington, FERC found [54] it unlikely that fluid (brine) migration from the Gallery 2 caverns will contaminate potable groundwater sources or Seneca Lake. 147 FERC ¶ 61,120 at P 93. Given the pressures proposed and allowed under the draft permit in this proceeding[55], the same conclusion applies equally to the Finger Lakes LPG Storage Project.

In consideration of its review of the geologic information provided by Gas Free Seneca's geologists, FERC concluded that there will be no significant impact on environmental resources due to geologic hazards or from the geologic framework present in the Gallery 2 Project area. 147 FERC ¶ 61,120 at P 94. FERC's determination and conclusions, along with the Application documents, the reports submitted with the Applicant's February 9, 2015 submission (including the Gowan Report and the Memorandum of John Istvan dated February 9, 2015 ["Istvan Memo"]), and the conclusions of Department staff completely rebut the contentions of the petitioners on the issues proposed for adjudication, including the extent of any known faults, the

[54] This conclusion is consistent with the conclusion reached by Dr. Gowan (Gowan Report, p. 31) and Department staff (Tr. at 265.)
[55] See Issues Conference Exhibit 12, Attachment 2.

healing properties of salt on such faults, and the impact of operational pressures on the caverns and on the overall suitability of the geology for hydrocarbon storage purposes. As such, there can be no substantive and significant issue since it has been demonstrated that the proposed caverns are adaptable for storage purposes.

D. Department Staff Completely Rebutted Petitioners' Argument

At the issues conference, Department staff concluded that Petitioners had failed to raise a substantive and significant issue. (Tr. at 258).[56] Department staff explained its due diligence and its review of the Application. For example, it noted that it requested more information about any faulting in the cap rock, which seems to be the focus of Petitioners' unsupported theories challenging cavern integrity. (Tr. at 260). Department staff described the review it conducted of the geophysical logs, Isopach and structure contour maps, well logging, and the available literature, all of which had been provided with the Application or in response to information requested of the Applicant. (Tr. at 261). Based on all of this information, Department staff agreed with the Applicant's conclusion that:

> The Camillus shale directly overlies the Syracuse salt sequence. This shale sequence is approximately 80 feet thick across the Finger Lakes LPG Storage area. As illustrated on the Camillus Shale Isopach map included with the revised Reservoir Suitability Report, the thickness of the Camillus Shale varies from 78 to 82 feet thick across the brine field. The fact that the thickness of the shale is so uniform confirms the interpretation that the Camillus shale cap rock has not been compromised by faulting. If faulting had occurred, significant shortening by normal faults or lengthening in response to reverse faulting would be reflected in the thickness of the Camillus shale.
>
> In addition, a structure map included with the revised Reservoir Suitability Report has been constructed on the base of the Camillus shale reflecting approximately 30 feet of dip to the west across the brine field. The consistent dip represented on the structure map reinforces the interpretation that no faulting extends into the Camillus shale cap rock.

[56] The transcript actually reads "Petitioners have failed to meet their burden to reassess as a community issue" so the transcript here should be corrected, assuming Department staff agrees.

NYSDEC OHMS Document No. 201166576-00038

(Tr. at 261). See also Document I.A.5, p. 8. In terms of the faulting, Department staff criticized and rebutted one of SLPWA's consultants (Dr. Nieto) by noting his views were contradicted not only by the literature (lack of scientific foundation) but also by a review of the core logs and mapping (lack of factual foundation). (Tr. at 263).

With regard to SLPWA's arguments about horizontal stresses in the context of a valley fill, Department staff noted that the history of underground storage at this location showed this was not an issue. (Tr. at 264). Moreover, the caverns are not directly under the valley under Seneca Lake. As the Applicant has noted,

> 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 the 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.

See Document I.A. 30, p. 1.

Department staff rejected and rebutted the efforts of SLPWA to minimize the importance of pressure test results. (Tr. at 265). As Department staff noted, "there is nothing to suggest that the pressure test should be discounted as a verified way to establish cavern integrity." (Id. at Lines 21-24). FERC viewed the pressure tests Arlington conducted in a similar way when it noted that "the brine pressure test conducted in Gallery 2 showed no loss, indicating the Gallery has integrity." 147 FERC ¶ 61,120 at P 30.

Petitioners failed to acknowledge, and completely failed to address in any acceptable detail the numerous permit conditions contained in the draft permit. Issues Conference Exhibit 12. At the issues conference, Department staff provided a summary of the more important conditions, including those related to pressure monitoring, cavern growth restrictions, maximum

storage volume, location in the cavern where LPG can be stored, maximum cavern span, sonar survey and Mechanical Integrity Testing requirements, and monitoring at adjacent wells (e.g., Wells 29 and 52) that are not part of the storage facility. (Tr. at 272-275). These conditions and the monitoring required as part of the operation of the facility will ensure that the caverns are safely operated and integrity of the facility is maintained as the FEA and other analyses have predicted.

E. Petitioners' Arguments are Without a Scientific Foundation, are Meritless, and Should be Disregarded

1. SLPWA's Issues Conference Arguments are Fiction Not Fact

At the issues conference and in its petition,[57] SLPWA raised five (5) potential issues relative to cavern integrity. (Tr. at 212-213). These related to: (1) the suggestion that the Applicant did not identify or adequately characterize the geologic faults located near the caverns (Tr. at 212, Lines 11-14); (2) the impact horizontal stresses would have on the storage caverns (Tr. at 212, Lines 15-19); (3) the supposed failure of the Applicant to accurately identify or adequately characterize the potential for brine leaks that could destabilize the caverns and harm Seneca Lake (Tr. at 212, Lines 20-24); (4) the failure to accurately identify or adequately characterize the ongoing enlargement of the caverns through the dissolution of salt by undersaturated brine and the difficulties this enlargement poses to any ongoing monitoring program (Tr. at 213, Lines 1-7); and (5) the failure to accurately identify or adequately characterize abandoned salt caverns located adjacent to the proposed storage caverns and that this alleged failure invalidates the Applicant's pressure testing and finite element analysis (Tr. at 213, Lines 8-14).

[57] SLPWA petition, pp. 9-22.

Each of these arguments lack merit, is not supported by any data in the Record or scientific foundation, and in some cases is so fanciful that they should be dismissed out of hand.[58]

With regard to the observation of faulting (although SLPWA spent some time accusing Finger Lakes LPG Storage of disputing this),[59] there is no dispute that a fault exists. However, the testing performed by Finger Lakes LPG Storage shows such faulting has been healed (making the salt formation "substantially stronger" according to Jacoby) and it certainly does not leave the salt formation as the science fiction of the petitioners have argued.

During her presentation, Ms. Treichler used Figure 2.B. of Vaughan's report and Stone & Webster's map (included as Exhibit 5 to Vaughan's report) to show faulting, first identified by Jacoby. (Tr. at 213, Lines 18-24; Tr. at 214, Lines 1-24; Tr. at 215, Lines 1-8). The point of this exercise was to claim that the Applicant's stratographic cross section and consideration of this fault and the FEA omitted consideration of the Jacoby Faults. (Tr. at 215, Lines 9-15).

Nothing could be further from the truth. From the very outset of this application process, the Applicant was sure to address the Jacoby fault and the Department made sure that the Applicant addressed this issue adequately. The Reservoir Suitability Report specifically addressed Jacoby's papers. See Document I.A.G., Section 7.2. As noted in greater detail above, recently when FERC considered Arlington Storage's Gallery 2 proposal, it thoroughly evaluated the known faults in and around this area and the impact on the ability to store natural gas (which will be stored under greater pressure than in the LPG storage caverns).

[58] As noted above in footnote 1, in its Response to Party Status Petitions, Finger Lakes LPG Storage refuted and debunked the theories espoused by petitioners Gas Free Seneca and SLPWA in their attempts to challenge cavern integrity. These and the other arguments asserted in Finger Lakes LPG Storage's Response to Party Status Petitions are incorporated herein by reference.

[59] Tr. at 220.

NYSDEC OHMS Document No. 201166576-00038

Vaughan suggests that the fault extends above the salt layer. What purportedly supports this position? Apparently Dr. Jacoby's observations of brine escaping at the surface north of well 29 (which is to the east of the proposed Finger Lakes Gallery 1) during hydrofracturing activities. (Tr. at 216, Lines 1-7). Other purported support for this conclusion is a map prepared by Stone & Webster which, it is suggested, shows discontinuities in stratographic depth and thickness along the fault. (Tr. at 216, Lines 8-12). However, even Stone & Webster's own map suggests that the existence of a fault leaving the salt is in doubt[60]. Moreover, contrary to SLPWA's assertion (Tr. at 216, Lines 14-17; Tr. at 221, Lines 19-22), the pressure testing and core logs demonstrate[61] that the plastic properties of the salt has healed any fractures within the salt. Dr. Vaughan, who has no experience in salt, salt behavior, salt mining or gas storage, attempts to cast doubt on the healing properties of salt. But Dr. Vaughan does not and cannot provide any valid scientific foundation for his assertions because healing qualities of the salt were well documented by Dr. Jacoby in relation to cavern development.[62] Dr. Gowan assumed that there are pre-existing, healed faults and fractures in the salt and associated rock interbeds throughout the area associated with the two proposed galleries and the two Arlington galleries. The cavern pressure tests and the successful storage of natural gas and LPG at the Arlington galleries are ample proof of the integrity of these layers and associated healed faults for the proposed use of the Finger Lakes LPG Storage caverns.

---

[60] See Vaughan Report, Exhibit 5, where it is shown that Stone & Webster's map characterizes the fault's existence as "doubtful."

[61] See Section VII.B., *supra*, for a recitation of the evidence demonstrating cavern integrity and the location in the Record of the pressure testing results and core logs.

[62] See Jacoby, Storage of Hydrocarbons in Cavities in Bedded Salt Deposits Formed by Hydraulic Fracturing, 1969. Several of the papers authored or co-authored by Dr. Jacoby are cited as references in the Reservoir Suitability Report (see Document I.A.5, p. 19) and in the Gowan Report (p. 45). Therefore, for convenience, this article is attached as **Exhibit 2**.

However, the only "evidence" Vaughan seems to cite[63] to support his theory that the fracture identified by Jacoby is not contained fully within the salt seems to be statements or observations made by Jacoby himself. Unfortunately, the problem with the "evidence" is that it is presented by Jacoby in a contradictory and apparently anecdotal or offhand fashion without giving any background information such as when it was observed, who observed it, how much was it flowing, how was it tested, and whether the observation was even recorded. The information was first presented by Jacoby in 1965[64], where Jacoby stated that "similarly, Well #29 fractured to Well #32 or in an approximate north-south direction rather than the anticipated preferred direction of east-west. The original target for Well #29 was Well #34 located some 490 feet to the west. Well #32 is located 810 feet to the south of Well #29."[65] Jacoby continued that all four wells, which apparently include Wells 29, 32, 33 and 34, were abandoned as fractured galleries. It would appear that no further attempts at hydrofracturing were made at Well 29.[66]

The information provided in Jacoby's 1965 article raises serious questions about his observation contained in a later paper he co-authored with Dellwig.[67] With regard to Well 29, Jacoby and Dellwig noted that "during fracturing, a flow of brine at the surface 0.5 mi. to the north must certainly be interpreted as the result of movement of brine from the well along the tear fault."[68] In the same article, Jacoby and Dellwig stated that "the structure contour map on top of the salt gives no indication of the faults breaking up into the overlying sediments."[69] Based on the Record, the Application, Department staff's views as expressed at the issues

[63] See Vaughan Report, ¶¶ 29-30.
[64] Jacoby, Effect of Geology on the Hydraulic Fracturing of Salt, 1965, attached as **Exhibit 3**.
[65] Id. at 318.
[66] Id.
[67] See Jacoby and Dellwig, Appalachian Foreland Thrusting in Salina Salt, Watkins Glen, New York, 1974, attached as **Exhibit 4**.
[68] Id. at 232.
[69] Id. at 231.

NYSDEC OHMS Document No. 201166576-00038

conference, and the expert reports of the Applicant, it is clear that any fractures that may have existed within the salt have healed (and not extended into the caprock) and that therefore the caverns have integrity and are adaptable for storage purposes. As such, petitioners have failed to raise a substantive and significant issue.[70]

In terms of the salt's ability to enclose any faults that may exist, SLPWA attempts to cast doubt on such properties. (Tr. at 217). But, even Jacoby has recognized the healing properties of salt and that "once this 'healing' has occurred, we have never been able to re-establish the fluid connection."[71] Jacoby noted in part that the healing is a result of the dilation of the salt in the walls or pillars of the cavity. As Gowan explains in his report, "the healing nature of the salt and associated shale interbeds is further suggested by the lack of pressure connection between Well 33 cavern and the caverns at wells 34, 43 and 44 when the pressure was bled off at Well 43 and showed no effect at Well 33."[72] Based on all of the evidence, there can be no dispute or debate that whatever fractures may have been created (through hydrofracturing) or existed (the Jacoby fault) has been healing through the crystalline properties inherent in the salt.

Realizing the weakness of their argument that the fracture leaves the salt layer, SLPWA was forced to devise a backup theory. Their attempt to do so, by arguing that ongoing horizontal stresses will somehow open these faults, also fails. SLPWA suggests that horizontal stresses will occur because of the valley fill of Seneca Lake and the dissolution of salt by interaction with undersaturated brine. (Tr. at 217). As a result of these stresses, SLPWA suggests, there is a direct pathway between the salt beds and the lake. (Tr. at 220). The lack of factual and scientific foundation for, and indeed absurdity of, this theory is demonstrated by the pressure tests

[70] To further ensure that there is no subsurface connection between Well 29 and Gallery 1, DEC's draft permit requires that the well either be plugged or used as a monitoring point (see Draft Permit Condition 17).
[71] See Jacoby, Storage of Hydrocarbons in Cavities in Bedded Salt Deposits Formed by Hydraulic Fracturing, 1969, at p. 466.
[72] Gowan Report, p. 9.

conducted on the caverns. Nevertheless, SLPWA next attempts to critique the pressure tests. (Tr. at 221-222). However, SLPWA's experts once again misunderstand[73] the purpose of a pressure test which is to first "pressure-up" the cavern and most importantly monitor if there are any significant drops in pressure. See Document I.A.6, pp. 7-8 and Exhibits 11 and 12.

The suitability of LPG storage at the Finger Lakes galleries is supported – and the contentions Petitioners in this regard are refuted – by a comparison of proposed cavern pressures with that at the nearby Arlington Galleries. The authorized maximum and minimum, stabilized pressures at Arlington Gallery 1 and 2 are 0.9 psi/ft and 0.2 psi/ft, respectively, at the casing shoes. See FERC Order, Appendix A. This maximum is much higher than the maximum proposed operating gradient for Finger Lakes LPG Storage (of 0.62 psi/ft at Well 58 and 0.75 psi/ft for Well FL-1). See Draft Permit, Attachment 2. The minimum operating gradient at the proposed Finger Lakes LPG Storage Galleries will be 0.52 psi/ft as required by the DEC; consequently, there will be less stress on the caverns at Finger Lakes LPG Storage Galleries 1 and 2 from the storage of LPG than on Arlington Gallery 1, which has been storing natural gas without incident since sometime after 1996.[74] Thus, because higher pressures at the Arlington Gallery are found to be acceptable and without issue, so too should the lower pressures at the Project. This unassailable demonstration and logic of cavern integrity satisfies the dictates of the ECL; moreover, it rebuts and indeed precludes any argument that there is an adjudicable issue with regard to cavern integrity.

[73] See SLPWA petition, p. 19; Tr. at 221-222.
[74] Gowan Report, p. 10; see also Issues Conference Exhibit 32.

2. *Gas Free Seneca's Arguments at the Issues Conference Reflect their Misunderstanding of Hydrocarbon Storage in Salt Geology; They Thus Fail to Provide a Valid Scientific/Factual Foundation for Their Proffered Issue*

Gas Free Seneca focused on three topics at the issues conference. The first relates to their basic misunderstanding of a rubble pile. The key in depicting caverns[75] (see, e.g., Gowan Report, February 2015, Figure 2) is to show where storage operations will occur. No abandoned caverns (including those consisting mostly of rubble) in the vicinity of proposed Gallery 1 or Gallery 2 will affect the safe and secure hydrocarbon storage operation.

The only reason that a small cavern, very low in the salt section, is shown on the cross section is that it was the only cavern sonared at that point in time (i.e., 1976). As Wells 33, 34, 43, and 44 are all fracture connected low in the salt section, all of the area below the wells are filled with the rubble that was undercut by the dissolution of salt below the insoluble layers, causing those layers to break up and fall into the open chamber formed by the salt dissolution. No sonars had been obtained to depict those other caverns in the area of the fracture connections, and thus there is nothing to be seen on the cross-section in those areas.[76] The FEA did not consider the abandoned caverns buried in the rubble piles below the planned storage caverns since they will not be a part of the storage operation, and the wells and caverns to be utilized will have been evaluated by mechanical integrity pressure testing. The primary safety controlling factors in storage caverns are the well and the mechanical pressure integrity within and above the caverns, not the shape or volume of the rubble.[77]

---

[75] According to Department staff, the mapping included in the underground storage application of Finger Lakes LPG Storage is what DEC requires as a matter of practice in applications for underground storage permits. There are no regulations so, as Ms. Maglienti described at the Issues Conference, Department staff has developed a set of guidelines of what information must be presented and how it must be shown on maps and drawings. (Tr. at 264-265).

[76] Istvan Report, pp. 9-10.

[77] Id. at 10.

NYSDEC OHMS Document No. 201166576-00038

Contrary to the suggestion of Gas Free Seneca at the issues conference (Tr. at 228), in addition to the fact that any fractures would be healed (and the caverns have a history of stability and have passed long term pressure testing), no fluid (undersaturated or of any other type) will be circulated through the rubble pile at the base of the caverns. Figures 6 and 7 in Dr. Gowan's report show the storage operation and solution mining operation, respectively. Brine or fresh water will be injected above the rubble pile (insolubles). The fluid in the rubble will be saturated brine that will stay in the bottom since it is more dense than fresh water or undersaturated brine. The fresh water or undersaturated brine injected into the cavern will rise upward due to their lower densities relative to the dense saturated brine residing in the rubble. The fact that the more saturated, denser brine sinks to the bottom is the reason that the Department requires that the brine displacement fluid be drawn from the bottom of the brine ponds (Draft Permit Condition 1b).[78]

While Gas Free Seneca's concerns regarding expansion of the cavern lack a factual or scientific foundation, the draft permit does contain a condition (1(f)) which requires Finger Lakes LPG Storage to maintain a "hydrocarbon and/or nitrogen blanket" in both galleries. The purpose of a "blanket" is to provide additional assurance that the roof of the cavern is not affected by operational solutioning with undersaturated brine. (Tr. at 268 - Department staff's description of the "blanket" and its benefits). Consequently, in addition to Dr. Gowan's complete refutation of Gas Free Seneca's contention that the injection of undersaturated brine will impact cavern integrity, the addition of a draft condition provides an added factor of safety.

Finally, the notion that the Gallery 2 cavern "dropped" is abjectly baseless. Whether or not the roof of the Well 58 cavern is perfectly flat or not is immaterial and certainly does not signal impending roof collapse. (Tr. at 235). Indeed, the core data shows that the Camillus

[78] Gowan Report, section 2.1.2.5, p. 14.

NYSDEC OHMS Document No. 201166576-00038

Formation, which forms the roof of Gallery 2, has excellent rock quality and any fractures are healed by salt and calcite.[79] FERC agreed that there were no issues with Finger Lakes LPG Storage Gallery 2. 147 FERC ¶ 61,120 at P 82 ("the seismic event cited in Dr. Clark's comments has never been validated and subsequent reentry into Cavern Well No. 58 and sonar logging in 2009 by U.S. Salt showed that the cavern was intact, and what was originally interpreted as a roof collapse was not").

3. The Theories, Hypotheses and Conclusions of Petitioners' Experts Have No Scientific Foundation, are Not Reliable and thus Cannot Raise a Substantive and Significant Issue

As detailed in Finger Lakes Responses to petitions submitted on February 9, 2015, the arguments presented by petitioners Gas Free Seneca and SLPWA and ostensibly supported by Drs. Clark, Nieto, Vaughan, and Myers are often without basis in fact or science and are unsupported by the significant testing of the proposed storage caverns that has been conducted[80]. Moreover, the petitioners' consultants have limited knowledge, at best, of how such storage caverns will actually operate and this becomes clear in the speculative, uninformed conclusions made in the reports included with the Petitions. For instance, it is clear that Dr. Clark refuses to accept (or assimilate) the plain evidence from the Well 58 sonar that previous conclusions made regarding a collapse of the cavern were inaccurately reported.[81] Moreover, Dr. Nieto's conclusions are perplexing at best. For instance, Dr. Nieto asserts that the Applicant did not recognize the presence of the "Jacoby-Dellwig" Fault, or the significance of Jacoby's observations and subsurface geology work as affecting the proposed storage scheme. This is

[79] Gowan Report, Section 2.1.3.3., p 23; Document I.A.5, Updated RSR, Exhibit 5.

[80] Even if it could be argued that there exists a scientific or factual foundation for the assertions of petitioners, those assertions are completely rebutted by the Application documents, the submissions made by Finger Lakes LPG Storage, and Department staff.

[81] See Gas Free Seneca petition, Exhibit 1 ("Clark Report"), at p. 19. Moreover, Dr. Clark apparently refuses to accept the fact that even Mr. Sevenker, who earlier opined about this cavern collapse, upon reviewing the sonar for Well 58 that was performed in 2009, recanted his position. See Document I.A.23.

plainly rebutted by reviewing the Reservoir Suitability Report of Finger Lakes LPG Storage.[82] See, e.g., Document I.A.5, Updated RSR, Section 7. Yet, after incorrectly criticizing the Applicant for not discussing this fault, Dr. Nieto continues by suggesting that Jacoby's interpretation was wrong. Dr. Nieto submitted a figure[83] that shows a "reformulated fault" that essentially connects the Arlington galleries to Seneca Lake. As Mr. Gowan discussed in this report, Dr. Nieto provides no geologic evidence from the site or drill holes for this interpretation. The fault, as drawn by Dr. Nieto, is not consistent with horizontal stresses and strain (deformation) and is not consistent with the decollement associated with the salt throughout the region. Furthermore, it is not possible for this fault, as created by Dr. Nieto, to have no offset in some of the rock intervals (such as the Camillus Formation) above the bedded salt cavern sequence while having offsets in other units such as the Onondaga Formation.[84]

Simply put, the assertions made by petitioners in support of their arguments regarding cavern integrity often rely on supposition and conveniently fail to recognize the complete record (e.g., with regard to the Gallery 2 cavern [i.e., Well 58]), well established physical properties of salt and its ability to strongly "heal" any fractures, and other relevant facts (e.g., any daylighting of brine in connection with the development of Well 29 relates to hydraulic fracture pressures). As a result, their conclusions are unreliable, contrary to generally accepted scientific principles, and lack a scientific foundation. As such, these theories should not be viewed as reliable in the administrative context.

In Matter of the Application of Seven Springs, LLC, Ruling On Issues and Party Status, 2002 N.Y. ENV LEXIS 42, at *41 (NYSDEC 2002), it was held that "whether or not a proposed new process or technology can be reasonably relied upon to produce the result intended is not

[82] SLPWA petition, Attachment B ("Nieto Report"), p. 1
[83] Nieto Report, Figure 1.
[84] See Gowan Report, p. 34.

only a function of the scientific principles upon which it is based, but whether or not the process has 'gained general acceptance in the particular field in which it belongs.'" (quoting Frye v. U.S., 293 F. 1013 (D.C. Cir. 1923) [use of systolic blood pressure to evaluate the truthfulness of a witness]; People v. Wesley, 83 N.Y.2d 417 (1994) [admissibility of DNA identification tests]). And, the ALJ concluded in the Seven Springs proceeding, that such scientific principle can only attain that status of general acceptance when it has "passed beyond the trial stage." 2002 N.Y. ENV LEXIS 42, at *41 (citing People v. Magri, 3 N.Y.2d 562 (1958) [use of radar in determining a motor vehicle's speed]).

In Frye, the now long-recognized rule was first enunciated that expert testimony based on scientific principles or procedures is admissible only after the principle or procedure has "gained general acceptance" in its particular field. See also People v. Wesley, 83 NY 2d 417, 422 (1994). In Wesley, the New York Court of Appeals explained that "General acceptance" is not defined as "unanimously indorsed" by the scientific community, but as "generally acceptable as reliable". Id. at 423.

New York courts particularly stress that "of singular importance, the acceptability and reliability of a testing methodology emphasizes counting scientists' votes, rather than verifying the soundness of a scientific conclusion." Matter of New York City Asbestos Litig., 2013 NY Misc LEXIS 6317 (NY Sup Ct Nov 26, 2013) (modified testing methodology) at 16-17 (citing Parker v. Mobil Oil Corp., 7 NY. 3d 434, 437 (2006). Moreover, for the purposes of the Frye test, "the burden of proving general acceptance in the relevant scientific community rests upon [the] proponent of the disputed testimony," and "the proponent must show the court the number and percentage of scientists favoring the principle or theory." Banks v. LaValley, 2013 U.S. Dist. LEXIS 186936 (S.D.N.Y. Oct 9, 2013) (quoting People v. Williams, 830 N.Y.S.2d 452

(Sup. Ct. Kings Cnty. 2006)), at 42-44. Therefore, in this proceeding, in addition to bearing the burden of persuasion that there exists an issue for adjudication, petitioners also must demonstrate that their theories regarding cavern integrity not only have support in the data presented in the Record but also in the scientific community.

In Cornell v. 360 W. 51st St. Realty, LLC, 22 N.Y.3d 762 (2014), the New York Court of Appeals took the Frye test one step further, finding that while Frye focuses on just principles and methodology, they are not entirely distinct from one another, and so even when the expert is "using reliable principles and methods and is extrapolating from reliable data, a court may exclude the expert's opinion if 'there is simply too great an analytical gap between the data and the opinion proffered'". Cornell, 22 N.Y.3d at 780-82 (citing General Electric Co. v. Joiner, 522 US 136 (1997); (citing Marso v Novak, 42 AD2d 377 (1st Dept 2007).

Applying the above to the consultants proffered as experts by petitioners compels the inexorable conclusion that their theories are not supported in the Record, and in some instances are so far outside their disciplines and/or are so fanciful as to defy physics and logic. For example, Dr. Vaughan lacks direct experience with salt behavior and did not provide any substantive theories or proof of his theories that satisfy the Frye and Wesley or even demonstrate a scientific foundation that warrant identifying an issue for adjudication. SLPWA attempts to rehabilitate Dr. Nieto and his theories by suggesting he has an impressive resume. Tr. at 278. However, Dr. Nieto has no experience evaluating underground gas storage facilities. That is why Dr. Nieto cannot support his proposed new fault by pointing to any supporting factual or scientific data.[85]

[85] Of course, petitioners assert more testing would be required to prove or disprove this new fault. (Tr. at 279). But such additional testing is not necessary because it is well established that the fault exists and that the salt has "healed" such faults and this has been demonstrated through the pressure tests Finger Lakes LPG Storage has conducted. See, e.g., Gowan Report, pp. 33 and 36; Document I.A.5, Updated RSR, Section 7.2, pp. 9-10.

NYSDEC OHMS Document No. 201166576-00038

The underlying basis for determining reliability has been long established in New York and provides the basis as to why certain theories presented by the petitioners should not be considered reliable or even considered in determining whether there is an adjudicable issue with regard to cavern integrity.

It is apparent from the examples provided herein that the petitioners' consultants ignored the Application documents and the underlying geological data and, as Dr. Gowan concludes, "there appears to be a predisposed desire to connect the site to Seneca Lake without the benefit of data or the concurrence of any other scientist except for SLPWA's only other witness, Dr. Ray Vaughan."[86]

In summary, in contrast to the unsupported assertions made by petitioners' consultants, the geologic information, well integrity assessments, cavern integrity assessments and FEA provided by Finger Lakes LPG Storage for the proposed project along with the operational and monitoring guidelines in the draft permit and the successful current and past use for storage and the associated tests of the neighboring caverns all document the suitability of the proposed galleries for LPG storage.

F. Petitioners Have Not and Cannot Demonstrate Any Connection Between the Salt Caverns and Seneca Lake

In terms of the water quality issues, Gas Free Seneca suggested at the issues conference that pressure cycling during operation of the storage caverns could impact the salinity of Seneca Lake. (Tr. at 288). Gas Free Seneca relies on Dr. Myers to support its theory that LPG storage must have caused the high salinity in the lake because scientists (including Dr. Halfman) have not arrived at an adequate explanation.[87]

---

[86] Gowan Report, pp. 33-34.
[87] See Gas Free Seneca petition, Exhibit 3 ("Myers Report").

NYSDEC OHMS Document No. 201166576-00038

The conclusion that previous LPG storage adjacent to the site where Finger Lakes LPG Storage is proposing to conduct LPG storage as part of this proceeding caused the massive spike is not supported by any evidence or plausible theory espoused by Dr. Myers, Dr. Clark, Dr. Nieto, or Dr. Vaughan. As Dr. Gowan observes, a temporal coincidence is not sufficient evidence. It is more likely that the chloride spike and multi-decade decline in concentration is the result of a change in regulatory oversight that occurred following the implementation of the Clean Water Act in 1972, the Safe Drinking Water Act in 1974 and the State Pollutant Discharge Elimination System ("SPDES") enactment in 1975.[88]

Dr. Myers posits a theory to explain how past LPG storage caused the chloride spike in the 1960s, and how future LPG storage will do the same. According to Dr. Gowan, Dr. Myers' theory is based on advection, which has been defined as "just a fancy word for the movement of mass entrained in the flow. Solute advection is the movement of dissolved substances because the water they are moving in is moving."[89] As paraphrased by Dr. Gowan, Dr. Myers' theory is that the salt is dissolved in the water, which is flowing from the salt source to the discharge point, which, in this case, is Seneca Lake. According to Dr. Gowan, the "interesting twist" on the foregoing explanation of advection is that Dr. Myers considers the salt source to be salt that is contained in the sediment at a location that is 2/3 of the distance up the lake (to the north) or approximately 20 miles north of the proposed storage facility.[90]

In the context of whether this satisfies the tests espoused in Frye and adopted in Seven Springs, Dr. Myers offers a defense of his theory by stating "[t]he advection process is extremely

---

[88] Gowan Report, p. 41.

[89] Gowan Report, pp. 40-41 (citing Fitts, Charles R.; 2002; Groundwater Science: London: Academic Press

[90] Gowan Report, p. 42. See also Report prepared by Dr. Donald Siegel with his Evaluation of the Scientific Plausibility of "Salting" Seneca Lake by Storing Liquefied Propane in a Brine Filled Salt Mine, Watkins Glen, New York, submitting as Attachment 3 to the February 9, 2015 Pre-Issues Conference Submission of Finger Lakes LPG Storage ("Siegel Report").

complex and representative data is very difficult to collect, so it would be very difficult for FLLPG or others to complete analyses that would suggest that LPG storage over the next 50 years could be done safely and without causing massive salt influxes to Seneca. For the same reasons, I also do not believe that FLLPG can adequately monitor or prevent serious adverse water quality changes from additional chloride discharges into Seneca Lake through its LPG storage operations."[91] In other words, according to Dr. Gowan, this theory cannot be replicated mathematically within known geologic parameters, and it cannot be tested.[92] In other words, according to Dr. Gowan, "this is not science."[93]

Thus, by this own assertions, Dr. Myers fails the Wesley and Frye tests. As Dr. Gowan concludes, Dr. Myers' theory is "one of the must unfounded, unsupported and implausible theories of advective flow" he has ever seen in his professional career.[94]

Similarly, the suggestion that any pressures (including when injection and withdrawal cycles are occurring) utilized during storage operations will impact "surrounding layers of sediment in the same way that if you were to fill a balloon (Tr. at 291) is simply not credible. The pressures needed to induce hydrofracturing (in essence what the Petitions attempt to describe) are well in excess of any pressure needed or proposed to be permitted. See Issues Conference Exhibit 32.

Gas Free Seneca's attempts to liken the phenomenon they describe to a giant tube of toothpaste is both inappropriate and scientifically infeasible. (Tr. at 292, Lines 2-3). As Gas Free Seneca further described this "tube of toothpaste" at the issues conference, it apparently consists of the salt layer with shale layers that extends from the caverns to where the salt layer

[91] Myers Report, p. 2.
[92] Gowan Report, p. 42.
[93] Id.
[94] Gowan Report, p. 42.

NYSDEC OHMS Document No. 201166576-00038

intersects the bottom of the lake less than 10 miles to the north. (Tr at 293). This concept calls for the squeezing of the "toothpaste" (deformation (also known as strain) of the salt) at the cavern locations as a result of the gas pressure in the caverns. Gas Free Seneca compared the gas pressure in the caverns to a balloon pushing on whatever it is touching (salt or toothpaste). (Tr. at 292). The Gas Free Seneca concept calls for the deformation (strain) to be transmitted 10 miles out from the cavern to the bottom of Seneca Lake where it somehow causes a spike in the salinity of the lake. Gas Free Seneca's explanation for how this strain is transmitted to ground water flow from the bottom of the lake is unintelligible and sufficiently convoluted, by apparent design, so that it is not even possible to determine whether there is even an explanation being provided. (Tr. at 293, Line 24 and Tr. at 294, Lines 1-19).

Rather than just relying on the obvious conclusion that the Gas Free Seneca concept is implausible and not consistent with science, Finger Lakes LPG Storage has conducted its own analysis that shows that there is no merit to the Gas Free Seneca theory. As Dr. Gowan states in his report[95] "[t]his strain [deformation of the salt], which has been modeled in the [Finite Element Analysis] FEA provided by Fuenkajorn (2010) for the proposed Finger Lakes storage project and by others for the neighboring caverns, only extends a short distance into the surrounding rock and has been shown to have no effect on the inter-cavern pillar between Gallery 1 and Gallery 10. Dr. Myers is calling for this strain to extend through the solid salt at a distance of approximately 20 miles [changed to less than 10, Tr. at 293] to an area where the salt bearing formations are in contact with sediment that contains brine in its pores. It is apparent that he does not include brine flow through the rock as part of his mechanism. It is Dr.

[95] Gowan Report, p. 43.

Gowan's opinion that Dr. Myers' theory is not plausible. If pressures in neighboring galleries have not been recorded as the result of strain induced by an operating gallery at the site, then it is not realistic to expect an induced pressure 20 [10 miles] miles away."[96]

The science of the lake and its chloride levels has been most studied by Dr. John Halfman. Even Dr. Halfman has admitted that "professionally and scientifically, I can't prove they [Crestwood] will do anything wrong." (Tr. at 313). Simply stated, the application materials, testing, position of Department staff and the draft permit are more than adequate to rebut the speculation presented by Petitioners of what caused an historical increase in chloride levels in Seneca Lake. This proceeding may never be able to answer that question and it is not purpose of adjudication to do so.

With regard to some of the supposition and claims connecting historic underground storage practices[97] to the rise in chloride levels in Seneca Lake, Dr. Siegel demonstrated that the assertions made by the Petitioners reflect their total lack of knowledge of salt formations, the local geology, basic tenets of physics, well drilling basics, and how a storage cavern is operated. Dr. Siegel made a number of observations. First and importantly in the context of whether there is a substantive and significant issue, at no time historically have chloride concentrations in Seneca Lake approached DEC or any other drinking water standards.[98] This is something Petitioners have conveniently ignored. Dr. Siegel, like Dr. Gowan, concludes that Dr. Myers' claims that over-pressuring at the storage facilities could propagate a pressure wave miles to the north and deform lake clays 50 meters thick to "squeeze" brine in the lake sediment to seriously

[96] Gowan Report, p. 43 (citing the FEA which is contained in the Record in Document I.A.8, Exhibit C).

[97] SLPWA even attempts to stretch realism by creating facts out of whole cloth, like the reason TEPPCO closed its underground LPG Facility in 1984. Indeed, underground storage of LPG ceased in 1984 and the caverns were filled with brine. See Document I.A.2, Exhibit 10, pp. i, 1 and 6. There is absolutely no evidence to support the statement made by Ms. Treichler at the Issues Conference that the "LPG Storage in the past may have had problems. It's not without problems." (Tr. at 280).

[98] Siegel Report, pp. 4-5.

contaminate the lake with chloride is "utterly beyond" belief.[99] Even when brine or propane are briefly over-pressured to allow them to replace and "push out" the fluid in the cavern, it is impossible that this tiny pressure pulse could, undissipated tens of miles to the north squeezed over a hundred feet of varved lake clay at the northern part of the lake, raise concentrations of chloride in the lake over a hundred milligrams per liter.[100] Stating "possible," using false assumptions designed to "prove" points means little in science according to Dr. Siegel. Dr. Myers' notions are beyond implausible from first principles of physics.[101] Dr. Siegel concludes that Dr. Myers' notions are simply contrived to meet desired ends.

Department staff agreed. With regard to whether there could be an impact from the operation of the storage caverns on the lake, Department staff concluded that it is "not a reasonably likely scenario that there could actually be an impact there." Generally, Department staff noted that "as a regulatory agency we don't mitigate impacts that we don't recognize or agree with." (Tr. at 347). While the Department is certainly interested in the research, it agreed that this was not an issue for adjudication. (Tr. at 349).

As noted by Department staff, there has been solution mining activity occurring at this site for 70 years prior to the spike in the mid-1960s. To solution mine, those caverns would have to be pressurized and freshwater or undersaturated brine injected. If there was going to be an impact from this activity on the lake, it would not have only been seen in the mid or late 1960s. (Tr. at 349). In addition, even after LPG storage ceased in 1984, starting in 1996, there has been in operation a pressurized natural gas storage facility just east of where LPG was previously stored and south of the proposed Finger Lakes LPG Storage Gallery 1. Id. Indeed, as

[99] Id. at p. 7.
[100] Id.
[101] Id. at p. 8.

Department staff correctly noted, the pressure differential in natural gas storage is actually higher. (Tr. at 350).

As previously noted, conducting an adjudicatory hearing "where 'offers of proof, at best, raise uncertainties' or where such a hearing 'would dissolve into an academic debate' is not the intent of the Department's hearing process."[102] Matter of Adirondack Fish Culture Station, Interim Decision of the Commissioner, 1999 N.Y. ENV LEXIS 29, at *14-15 (NYSDEC 1999), at 8 (quoting Matter of AKZO Nobel Salt Inc., Interim Decision of the Commissioner, 1996 N.Y. ENV LEXIS 4, at *26 (NYSDEC 1996)); Matter of Seneca Meadows, Inc., Interim Decision, 2012 N.Y. ENV LEXIS 76, at *7. Petitioners ask the Department to adjudicate an academic debate of what has possibly caused temporary increased salinity levels in Seneca Lake (data shows the levels that have been decreasing).[103] However, that cannot be the purpose of an adjudicatory hearing for a specific permit application. Moreover, there is no scientific foundation demonstrating a nexus has been shown to exist between the integrity of the caverns to be used for gas storage and these high salinity levels. As such, any claim that the water quality of Seneca Lake should be an adjudicable issue is spurious and should be dismissed.

G. Conclusion

As noted above, "[j]udgments about the strength of the offer of proof must be made in the context of the application materials, the analysis by staff, draft permits are the issues conference record. Offers of proof submitted by a prospective intervenor may be completely rebutted by reference to any of the above, alone or in combination. In such a case, it would be a disservice to the applicant and the public at large to proceed any further with time-consuming and costly litigation." New York State Thruway Authority, Interim Decision Of The Commissioner, 2002

[102] Department staff also noted in this regard that "we do not move forward to costly adjudication on what could be or might be a coincidence." (Tr. at 363).

[103] See Seneca Lake Communities petition, Exhibit I, Affidavit of Dr. John Halfman, ¶ 10, p. 4.

N.Y. ENV LEXIS 25, at *6-7 (NYSDEC 2002); Bonded Concrete, Interim Decision of the Commissioner, 1990 N.Y. ENV LEXIS 44, at *4-5 (cited by Metro Recycling & Crushing, Inc., Decision of the Acting Commissioner, at 2005 N.Y. ENV LEXIS 27, at *6 (NYSDEC 2005)). Moreover, it "is not sufficient to merely raise information counter to the position of an applicant. The offer of proof must be competent, not merely contrary." New York State Thruway Authority 2002 N.Y. ENV LEXIS 25, at *15. The Applicant's experts, the analysis by Department staff, the conclusions of the New York State Geologist, and FERC have all concluded that the geologic formation supports underground gas storage and the tests performed by the Applicant demonstrate cavern integrity. The offers of proof made by the petitioners are not competent or credible. Therefore, there should be no issue for adjudication.

VIII. Safety

In their petitions and at the issues conference, Petitioners (Harp and Lausell, FLXWBC,[104] Seneca Lake Communities, and Gas Free Seneca) have sought to identify adjudicable issues relating to risk assessment, safety, rail safety and emergency response preparedness. However, as will be shown below, in each case, the assertions made by petitioners are not supported by the facts, by the expert risk assessments performed for Finger Lakes LPG Gas Storage, or by local emergency personnel and emergency plans that are in place to ensure that emergency personnel are ready to respond to any emergency. Moreover, petitioners fail to acknowledge the draft permit, which does address safety in the context of the requirement that the facility maintain emergency shutdown devices and prepare and implement an emergency response plan.[105]

[104] Harp and Lausell and the FLXWBC only seek amicus status.
[105] See Issues Conference Exhibit 12, Condition 7.

NYSDEC OHMS Document No. 201166576-00038

Gas Free Seneca argues that the 2012 Quantitative Risk Assessment ("QRA") submitted by Finger Lakes LPG Storage only analyzed risks associated with on-site releases from equipment. Moreover, they assert that the DSEIS does not analyze safety impacts of Project beyond property line or evaluate risks of events associated with rail transports, pipeline transmission and salt cavern storage.

According to Gas Free Seneca, although unlikely, a catastrophic event could occur if a train carrying LPG derailed on trestle located over gorge uphill from Village of Watkins Glen; or if a rail car punctured and leaked contents LPG could flow into town and ignite. Overall safety is implicated when Gas Free Seneca argues that numerous accidents have occurred in the U.S. involving salt cavern facilities; storing in caverns poses medium likelihood of extremely serious event.[106]

Similarly, Harp and Lausell assert that the DSEIS does not adequately address or mitigate dangers of LPG transport over Watkins Glen Gorge trestle. They fear, without any basis, that a derailment, bridge failure or act of terrorism at trestle would cause loaded rail cars to crash releasing gases or if ignited cause massive explosion creating deadly situation.[107]

More generally, the Seneca Lake Communities assert that the DSEIS does not properly evaluate potential significant adverse impacts that spill, accident or catastrophic events would have on emergency resources, but suggests the DSEIS does so in a limited and inadequate fashion. They also believe that although the Project does not affect Watkins Glens State Park, collateral effects that rail traffic will have on the park located under railroad route should be

[106] Gas Free Seneca petition, pp. 10-12.
[107] Harp and Lausell petition, pp. 4-11.

NYSDEC OHMS Document No. 201166576-00038

addressed. Finally, they assert that the Schuyler County Emergency Plan and Finger Lakes LPG Storage's QRA inadequately addressed risk of rail transport.[108]

Finally, the Wine Business Coalition asserts that proposed mitigation measures which rely on local volunteer fire and EMT services are insufficient and that agencies lack training or damage from escaping gas is beyond their response obligations.[109]

However, the DSEIS, the documents submitted by Finger Lakes LPG Storage on February 9, 2015, the draft permit, and the record of the issues conference demonstrate that petitioners cannot satisfy their burden of persuasion that an issue exists for adjudication. As discussed in detail below, Finger Lakes LPG Storage's February 9, 2015 submission included another QRA prepared by Quest Consultants ("Quest")[110] which addresses potential risks associated with the transportation of LPG ("Quest Transportation QRA"). The Quest Transportation QRA fully rebuts any criticisms made by Petitioners about the scope of the original QRA submitted by Finger Lakes LPG Storage.[111] Moreover, the Record, including the DSEIS, the affidavit of the County's Emergency Management Coordinator[112], and correspondence from the local Fire Chief[113] more than demonstrate the ability of local emergency personnel to respond to any emergency. Indeed, despite the attacks at the issues conference by Harp and Lausell about the uncertainty regarding the County's Emergency Management Plan (including how it treats the transportation of LPG), the revised and updated Plan was recently adopted unanimously by the County Legislature (with Mr. Harp seconding the motion). Finally, with the lack of any historic facts or statistics to support them, Petitioners

[108] Seneca Lake Communities petition, pp. 18-20.
[109] Wine Business Coalition petition, pp. 18-20.
[110] See Attachment 5 to the February 9, 2015 submission of Finger Lakes LPG Storage.
[111] See Document I.B.7, Exhibit 1.
[112] See Attachment 8 to the February 9, 2015 submission of Finger Lakes LPG Storage.
[113] See Document I.B.6, Attachment 17.

nevertheless paint unrealistic fatalistic scenarios with regard to rail transport of LPG, including with regard to traffic over the Watkins Glen trestle bridge.

Stated a different way, the Record is more than ample to rebut any assertions made in the Petitions for Party Status and Petitioners cannot raise a substantive and significant issue with regard to any public safety concern. Moreover, the Record allows the Commissioner to conclude that any potential impacts have been minimized and/or mitigated to the maximum extent practicable.

A. Risk Assessment

1. The Purported Expert Presented by Petitioners is Not Qualified to Perform a Risk Assessment on an Underground Gas Storage Facility

In their Petitions, Gas Free Seneca and Harp and Lausell argued that the 2012 QRA submitted by Finger Lakes LPG Storage[114] only analyzed risks associated with on-site releases from equipment. Harp and Lausell were particularly focused in this regard on the transportation of LPG over the Watkins Glen State Park trestle bridge. In support of their arguments, they both[115] relied on a report submitted by Dr. Rob Mackenzie ("McKenzie Report"), a medical doctor with no apparent expertise or experience in the field of performing quantitative risk analyses for a facility such as that proposed by Finger Lakes LPG Storage. Gas Free Seneca seemed to concede at the issues conference (Tr. at 103) that Dr. Mackenzie did not have the academic credentials or training to perform such a risk assessment, but then went on to compare Dr. Mackenzie's qualifications based on his experience in the medical administration field to Mr. Istvan's qualifications.[116]

---

[114] Document I.B.7, Exhibit 1.
[115] See Gas Free Seneca petition, Exhibit 2 and Harp and Lausell petition, Exhibit C.
[116] Of course, the comparison made by Gas Free Seneca only proves the Applicant's point. Dr. Mackenzie, while he does have a medical degree, has absolutely no experience in the field of underground storage. In comparison, Mr. Istvan has over 55 years of experience in oil and gas exploration and production, field geology and development of underground gas storage facilities.

NYSDEC OHMS Document No. 201166576-00038

Dr. Mackenzie's experience in the medical field, even including that related to health care risk analyses, is irrelevant. His report and any statements made by Gas Free Seneca or other Petitions which rely on his report should be completely ignored (or they should be accorded little weight). In order for an expert's testimony to be admissible, it is required "that the testifying expert possess the requisite skill, training, education, knowledge and experience from which it can be assumed that the opinion rendered is reliable." Bath Petroleum Storage, Inc. and EIL Petroleum, Inc., Ruling 9, Ruling on Discovery Disputes and Respondents' Motion to Dismiss, 2005 N.Y. ENV LEXIS 33, at *13 (NYSDEC 2005) (quoting Enu v. Sobol, 208 A.D.2d 1123, 1124 (3rd Dept. 1994); Mattot v. Ward, 48 N.Y.2d 455, 459 (1979)); Hellert v. Town of Hamburg, 50 A.D.3d 1481, 1482 (4th Dept. 2008). The issue of the weight to be accorded expert testimony "is properly resolved in the administrative process," Lampidis v. Mills, 305 A.D.2d 876, 877 (3rd Dept. 2003), and the extent of the witness's qualifications goes to the weight to be afforded the testimony. Felt v. Olson, 51 N.Y.2d 977, 979 (1980). Id. Moreover, the qualifications of a proposed expert witness can certainly be considered at the issues conference stage. See Seneca Meadows, Interim Decision, 2012 N.Y. ENV LEXIS 76; Gernatt Asphalt Products, Issues Ruling, 1994 WL 1735233 (NYSDEC Mar. 3, 1994); Onondaga County Resource Recovery Agency, ALJ Ruling on Party Status, Dec. 11, 1991. In this case, Dr. Mackenzie fails to satisfy the basic test to qualify as an expert in the field.

Finger Lakes LPG Storage's expert in performing QRAs, Quest, in assessing Dr. Mackenzie's qualifications, noted that "to properly assess the risk of hazardous materials, the analyst must adhere to certain methodologies established by process safety professionals. In addition, an educational background in engineering or a related science/technology field is important if the properties of the hazardous materials are to be properly understood. To develop

the knowledge about process safety and risk assessment that is necessary for this type of work, many years of experience are required."[117] In comparing this threshold background to Dr. Mackenzie, Quest noted that although Dr. Mackenzie is experienced in the medical field and the specific risk assessment techniques applied in that profession, the risk assessment associated with processing and transportation of petrochemicals is a completely different field, requiring different expertise. Simply put, Quest concluded that "Dr. Mackenzie has not demonstrated that expertise, thus clouding the credibility and validity of his work on this subject."[118]

Gas Free Seneca suggests that an issue with regard to the potential risks associated with the operation of the facility or the transportation of LPG should be adjudicated because there is a dispute among experts and that the two experts are simply employing different methodologies. (Tr. at 107). Nothing could be further from the truth. Contrary to the assertion made by Gas Free Seneca at the issues conference (Tr. at 107), Quest's report absolutely negates Mackenzie's report, in terms of Dr. Mackenzie's qualifications and his conclusions. As Quest notes: "Dr. Mackenzie's risk assessment conclusions are effectively an overprediction [of] the potential risk to the public in Schuyler County . . . a proper, comparative quantitative risk analysis was not conducted. The shortcomings in Dr. Mackenzie's analysis and lack of development of risk measures give an end result that has little to no value in determining the acceptability of the Finger Lakes LPG facility."[119]

Even though Dr. Mackenzie looks at historical information regarding incidents at other facilities where hydrocarbons are stored in salt, he ignores the DSEIS and the significant discussion differentiating the Project from the circumstances underlying potential accidents which have occurred at other facilities. See DSEIS Section 4.6.4, pp. 164-166. Dr. Mackenzie's

[117] Quest Transportation QRA, p. 50.
[118] Id.
[119] Id. at p. 56.

report is short on calculations, only dealing in general catastrophic event frequencies. The report does not evaluate all causes of death, only those found in literature concerning selected historical events. An evaluation of the risks from the existing LPG pipeline in Schuyler County is only of use in determining the incremental risk, not the acceptability of the proposed facility. It is unclear what the basis is for claiming that if Quest used the number for U.S. accidents their figure would have been 20 times higher.[120] Frequency numbers must be compared on an equal basis, considering the type of storage cavern, the product stored, and the types of accidents that could happen. There is no evidence offered which shows that salt cavern storage of LPG has a significantly greater risk than other means of storage. In fact, the DSEIS provides support for just the reverse. See DSEIS § 4.6.2, pp. 147-150.

Given Dr. Mackenzie's lack of expertise, petitioners' arguments lack a factual/scientific foundation, and petitioners have thus failed to meet their prima facie burden to raise an issue for adjudication. However, even if Dr. Mackenzie's report was considered a scientifically/factually founded offer of proof, Applicant rebutted it with the Quest reports, as discussed in the next section.

2. *Finger Lakes LPG Storage's Risk Assessment Expert is Well Qualified and Concluded in its Two QRA's That There is Minimal Risk Associated with the Proposed Storage Facility*

Quest, which is experienced in the field of risk assessment for facilities such as that proposed by Finger Lakes LPG Storage,[121] prepared two QRAs on behalf of Finger Lakes LPG Storage. The first addressed the storage, handling and loading and unloading of LPG products.[122] More recently, Quest prepared a Transportation QRA to assess the risk (or lack

[120] See Tr. at 109.
[121] See Quest Transportation QRA, p. 3.
[122] See Quantitative Risk Analysis for the Finger Lakes LPG Storage Facility, February 16, 2012; Document I.B.8 ["2012 QRA"]).

NYSDEC OHMS Document No. 201166576-00038

thereof) associated with transportation of LPG. In both cases, Quest concluded that the risk is well below accepted risk acceptance criteria. In contrast, in Quest's work, the consequences of potential accidents associated with hazardous materials, primarily flammable or acutely toxic materials involved in connection with the Project, are specifically defined as flammable hazards associated with accidental releases of LPG from the storage, transfer, and transportation systems.

Quest's 2012 QRA was composed of four distinct tasks:

Task 1 was to determine potential releases that could result in hazardous conditions outside the boundaries of the LPG facility. As part of this task, Quest identified 113 accident scenarios. Each scenario was a unique combination of an operating mode and a specific product (propane or butane) for one portion of the system. Each of these scenarios was further expanded to include four release hole sizes and two release orientations. See Quest 2012 QRA Section 6.5.

In Task 2, for each potential release identified in Task 1, the annual probability of the release was determined. This task relied on historical data available from the sources identified in the report.

In Task 3, for each potential release identified in Task 1, the potentially lethal hazard zones were calculated. This task involved quantification of the hazards posed by the individual accident scenarios. Each of the 113 scenarios identified in Task 1 was evaluated under a range of weather conditions, and for multiple hazard types. The results of these calculations limited the overall analysis to areas within about 1,500 feet of any potential release source. This was the maximum extent, under the worst-case weather conditions, that a flammable hazard created by a release of LPG from the facility could travel. All other offsite hazard zones were smaller for all other potential accidents. Because most release sources are away from the property lines, potential impacts outside of the facility boundaries are less than this maximum extent.

In Task 4, the annual probabilities from Task 2 were combined with the potential release consequences from Task 3 to arrive at a measure of the risk the facility poses to the neighboring public. The risk was quantified and presented graphically. The potential impact to the public was compared to generally accepted levels of risk and common modes of fatality that members of the public may experience.

Based on all of the above, Quest concluded as follows with regard to its 2012 QRA:

a) The risk to the public, measured as Location-Specific Individual Risk (LSIR, the risk to a single person) is dependent upon that individual's location. The maximum risk of fatality, for a member of the public who is located near the western boundary of the west portion of this facility (the truck/rail loading/unloading area), and remains in that location for a full year (365 days, 24 hours per day), is between 1.0×10^{-4} and 1.0×10^{-3}/year.[123]

b) The risk beyond about 1,500 feet of any of the facility's components is zero, because there are no fatal impacts that can reach that distance. This limits any level of risk from any part of the project to within approximately 1,100 feet of a property line. This is, however, strongly dependent upon the specific location around the facility.

c) Most offsite areas that are exposed to risk from this facility are exposed to risk levels in the range of 1.0×10^{-5} to 1.0×10^{-6}/year or 1 in 100,000 to 1 in 1,000,000.

d) The hazards associated with this facility are common to (and already exist) for the TEPPCO facility on Highway 14, to which this facility has a connecting pipeline. These hazards are also known and understood by employees of the LPG trucking company east of the truck loading area (one of the areas of highest offsite risk).

e) The risk associated with the Finger Lakes LPG facility is not unusual for industrial activities handling flammable materials.

2012 QRA, Section 6-5, pp. 6-8 to 6-9.

In summary, the hazards and risk 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

[123] Table 6-1 in Quest's 2012 QRA provides a conversion of these numbers (e.g., 1.0×10^{-6}) to the likelihood in increments of thousands. So, for example, per this table the risk of 1.0×10^{-6} is the equivalent of 1 in 1,000,000.

NYSDEC OHMS Document No. 201166576-00038

locations, and most offsite areas are found to be exposed to low levels of risk. In addition, this analysis is conservative in nature, so should provide an overprediction of the true risk imposed by this facility.

Quest's Transportation QRA evaluated the potential hazards to members of the public due to accidental releases from the Enterprise connection pipeline, LPG railcars moving in and out of the facility, and LPG tank trucks departing the facility. Quest Transportation QRA, Section 1.4.

Utilizing the same methodology as in its 2012 QRA, Quest's Transportation QRA reached the following conclusions:

a) A comparison of the risk posed by the three transportation modes shows that when the Finger Lakes LPG pipeline is used as a basis for transported volumes, movement of LPG by tank truck and railcar have somewhat higher risk than the pipeline, depending on an individual's location in relationship to the transportation route. If BLEVE events associated with tank trucks and railcars are omitted from the analysis, the risk for the road transportation modes is ten to one-hundred times less than the pipeline (given the fixed volume of product moved).

b) The fatality risk associated with the Enterprise connection pipeline is approximately 1.5×10^{-5} per year (or one chance in 66,670 per year) at locations directly over the buried pipe, assuming continuous occupancy. The risk **declines to zero** at approximately 750 feet away from the pipeline route. The additional pipeline that is part of the proposed Project extends for less than a half mile, in an area where there are no residences and little potential public exposure. Annual exposure above 1.0×10^{-6} per year (or one chance in 1,000,000 per year) is only predicted for the area within about 250 feet of the pipeline, again assuming continuous occupancy.

c) The Transportation QRA presented two projections of the truck activity associated with the Finger Lakes LPG facility – the current market estimations, and the set of values presented in 2012. According to the current (2014) estimates, there will be no LPG tank trucks activity at the Finger Lakes LPG facility. This means that the incremental risk from the project associated with LPG trucking will be zero.

d) Using the 2012 estimates for LPG truck activity associated with this project, the risk to the public, assuming continuous occupancy, is approximately 2.6×10^{-6} per year (one chance in 384,615 per year) on the roadway, declining to zero at approximately 600 feet away from the truck route. If the Finger Lakes LPG facility does load trucks, the associated risk will be distributed along Route 14 to the north and south of the facility. Most, if not all, of the truck activity from the facility (should it exist) is expected to displace truck activity leaving the

Enterprise facility. Thus, even with the 2012 estimates, the incremental risk to the surrounding area due to LPG truck activity is expected to be negligible.

e) For either the 2012 or current projections, the risk due to LPG railcar activity, assuming continuous occupancy, is predicted to be approximately 2.0 x 10-7 per year (or one chance in 5,000,000 per year) on the railway, declining to zero at approximately 1,100 feet away from the rail line. In all cases, the risk is imposed on the Schuyler County public only in the 12 miles of Norfolk-Southern track between the Finger Lakes LPG facility and the county line to the south.

f) At all locations further than about 1,100, 750, or 600 feet away from a rail, pipeline, or tank truck LPG transportation route, respectively, risk to the public associated with LPG transportation accidents is zero.

g) The most common international criterion for acceptability of risk posed on the public is exposure to a fatal hazard with a probability of 1.0×10^{-6} per year. This is equivalent to one chance in 1,000,000 per year of being fatally harmed by the hazardous material facility in question. By comparison with this criterion, all modes of transportation evaluated in this analysis are found to be acceptable when public occupancy is taken into account. In no case will a member of the public be present on a roadway, on the rail line, or above the pipeline for every minute of a given year. When an occupancy fraction is taken into account (for example, 3% of the year), the risk imposed by LPG transportation associated with the Finger Lakes LPG facility is clearly in the acceptable range by published international standards.

h) When compared to other causes of death, the risk imposed by the Finger Lakes LPG transportation activities is also found to be minimal – approximately equal to being struck by lightning, if an individual is within about 1,000 feet of a transportation route for an entire year.

Quest Transportation QRA, Section 7.5.[124]

The Seneca Lake Communities rely upon the generic affidavit submitted by Richard Kuprewicz; an affidavit submitted before Quest's transportation QRA. While Mr. Kuprewicz claims to have performed an initial review of "pertinent materials" in the record, he fails to reference Quest's initial QRA (available well before petitions were due). See Document I.B.7,

[124] Although the FLXWBC is only seeking amicus status, it suggests that the wineries it represents would be harmed by an incident at the proposed facility. However, Quest's QRA shows minimal off-site risk. Quest's work does evaluate certain flammable material hazards, as potential risk to people. The area impacted by these hazards is limited such that there is no discernable impact to the vineyard community. Explosions would not reach those areas with a damaging blast wave; slow escape of gas would disperse before reaching adjacent properties; and fires from accidental releases have limited impact zones.

Exhibit 1. Contrary to statements made by the Communities at the issues conference, Quest's work considered a wide range of potential events[125] from leaks to catastrophic failures. Each event was evaluated for various impacts to the public. Mr. Kuprewicz performed no such analysis. Moreover, statements made by counsel for the communities (See Tr. at 116, Lines 3-24; Tr. at 117, Lines 1-13) as to what Mr. Kuprewicz may or may not testify about are simply beyond the record and are not reflected or supported by the Communities' petition or Mr. Kuprewicz's affidavit. These statements should be disregarded; at most, it amounts to counsel's testimony – nothing more.

In summary, Quest's two QRAs, using well-defined and accepted methodologies, modeling, and probabilities in comparison to accepted internationally recognized fatality risk criterion, are the only qualified, objective, and credible studies of risk in the record. In comparison, Dr. Mackenzie's report is not a quantitative risk analysis. Dr. Mackenzie's conclusions are not valid or credible as a means of determining the acceptability of the facility because it is biased, qualitative, and failed to provide any comparative assessment. His report, even if allowed to be introduced, does not provide a scientific or evidentiary foundation for Petitioners' arguments and certainly cannot form the basis of identifying a substantive and significant issue.

B. Safety References in the DSEIS

The credibility of any petition for Party Status must be viewed in part by whether it recognizes that the Record has indeed addressed certain subjects. With minor exceptions, every petition fails to acknowledge the safety considerations the Applicant has identified and factored into its proposed operation as set forth in the DSEIS, under established regulation (e.g., EPA's Risk Management Program), or in the draft permit. For example, Harp and Lausell assert that

[125] See Quest Transportation QRA, p. 10, Section 3.1

the DSEIS does not adequately address or mitigate dangers of LPG transport over Watkins Glen Gorge trestle.[126] Similarly, the Seneca Lake Communities assert that the DSEIS does not properly evaluate potential significant adverse impacts that spill, accident or catastrophic event would have on emergency resources, but suggests the DSEIS does so in a limited and inadequate fashion.[127] However, the DSEIS identifies numerous components of the safety program, procedures and mitigation that is a part of the Proposed Project:

- Proposed mitigation measures, safety and emergency shutdown procedures are discussed in Section 4.1.3.3, pp. 83-84;
- Safety training that Finger Lakes LPG Storage will undertake is discussed in Section 4.6.3, pp. 156, 160;
- Numerous safety related agencies are identified as having jurisdiction over the operation in Section 4.6.3, pp. 155-56; and
- Accidental release prevention and emergency response policies that will be in place are described in Section 4.6.3, p. 157.

In addition, Finger Lakes LPG Storage will also be required to implement a Risk Management Plan ("RMP") and Process Safety Management ("PSM") system pursuant to EPA and OSHA regulations. See DSEIS, Section 4.6.3, pp. 157-164. To comply with the EPA's RMP, prior to operation, the facility will conduct a Hazard and Operability Study ("HAZOPS") to ensure that hazards associated with processes at the facility are identified and controlled efficiently. The study must be undertaken by qualified personnel with expertise in engineering and process operations as well as employees familiar with the process, and is revalidated at a regular interval of five years. Any findings related to the hazard analysis must be addressed in a timely manner. Indeed, EPA has issued a guidance document for a RMP at a propane storage facility. See EPA 550-B-00-001, Risk Management Program Guidance for Propane Storage

[126] See Harp and Lausell petition, p. 4.
[127] See Seneca Lake Communities petition, p. 19.

NYSDEC OHMS Document No. 201166576-00038

Facilities (40 CFR Part 68), Office of Solid Waste and Emergency Response, March 2009. There were no claims at the issues conference by petitioners that safety at the proposed facility was not adequately addressed in the DSEIS. Further, petitioners have failed to recognize that additional regulatory programs implemented by federal agencies such as EPA provide additional assurances that safe practices and procedures will ensure the safety of the public. To the extent the overall safety of the facility is raised as an adjudicable issue, it is clear that no substantive and significant issue has been raised.

C. Emergency Preparedness

Harp and Lausell, FLXWBC, and the Communities address emergency preparedness in their petitions. Harp and Lausell seem to mostly complain that the County Emergency Management Plan ("CEMP") is not yet finalized and that a draft Appendix to the CEMP and the simulations it includes is only in draft form.[128] The Seneca Lake Communities allege that the Schuyler County Emergency Plan and Finger Lakes LPG Storage's QRA inadequately addressed risk of rail transport.[129] Finally, the Wine Business Coalition asserts that proposed mitigation measures which rely on local volunteer fire and EMT services are insufficient and that agencies lack training or damage from escaping gas is beyond their response obligations.[130]

However, neither the petitions nor the offers of proof at the issues conference included statements by knowledgeable, qualified emergency personnel familiar with LPG, potential risks, or the ability of local emergency service providers to respond to an unlikely accident – meaning that the petitions and the offers of proof lack the requisite factual foundation. The contrast between the abject failure of the petitions to present an offer of proof on this proposed issue with

[128] Harp and Lausell petition, pp. 7-10. As discussed below, this position is now moot since the County Legislature has recently unanimously adopted the revised CEMP and Appendix.
[129] Seneca Lake Communities petition, pp. 18-20.
[130] Wine Business Coalition petition, pp. 18-20

NYSDEC OHMS Document No. 201166576-00038

what the Applicant presented is clear and stark. In fact, even the Draft[131] Appendix to the 2008 Hazard Mitigation Plan ("Appendix"),[132] included with Harp and Lausell's petition, further supports the Applicant's conclusion that County Emergency personnel are fully familiar with LPG, its transportation by pipe, rail and highway within the County, and the manner in which emergency response personnel should be trained.[133]

Like Harp and Lausell, the FLXWBC is neither in a special position (contrary to the contention in its petition) nor has unique knowledge to support the speculative and conclusory statements in its petition (p. 20) that "proposed mitigation measures which rely upon local Volunteer Fire and EMT services are insufficient where these agencies lack required training or damage from escaping gas." The affidavit of Mr. Kuperwicz, who is admittedly more familiar with pipelines, is equally conclusory and unpersuasive in this regard.

The Seneca Lake Communities recognize that the DSEIS addresses local emergency preparedness (the only petition to do so) but believe the discussion does not include "a frank analysis of its resources and effectiveness"[134] and leaps to the conclusion that therefore a hard look has not been taken. In fact, the DSEIS addresses local emergency services and emergency preparedness in Section 4.6.1, pp. 144-147 (identifying local emergency resources), and Section

---

[131] In their petition and at the issues conference, Harp and Lausell try to minimize the effort put forth in the Appendix suggesting it is still a draft and needs further review by the Public Safety Committee of the County Legislature. See Harp and Lausell petition at 8. While as discussed below the Appendix has now been adopted by the unanimous vote of the County Legislature, the Applicant certainly hopes that Harp and Lausell are nonetheless not suggesting that politics about the content of this document should weigh more heavily than the expertise (i.e., Mr. Kennedy) of those who have prepared it.

[132] Since the Issues Conference, the County Legislature approved in final form the CEMP, including the Appendix which addresses the transportation of LPG. The resolution of the County Legislature, unanimously adopted at its regular meeting on April 13, 2015 (with Mr. Harp seconding the motion), adopted the CEMP and the Appendix, under the County's authority as set forth in Article 2-B Section 23 of the New York State Executive Law. A certified copy of Resolution No. 46 adopted April 13, 2015 is attached hereto as **Exhibit 5**. Given that the CEMP is a public document, but is not yet available on line, a copy of the same is provided herein as **Exhibit 6**; and Applicant requests that the Chief ALJ take official notice of it as needed.

[133] As noted above, since the CEMP and the Appendix relating to the transportation of LPG has been finalized and adopted by the County Legislature, the remainder of this section of Post-Issues Conference Brief will focus on the adopted CEMP.

[134] Seneca Lake Communities petition, p. 19.

NYSDEC OHMS Document No. 201166576-00038

4.6.5, pp. 166-169 (discussing the capabilities of first responders). A written emergency response plan to deal with accidental releases of LPG will be in place. The plan will include all aspects of emergency response including adequate first aid and medical treatment, evacuations, notification of local emergency response agencies and the public, as well as post-incident decontamination of affected areas. Id.

In addition, the Appendix (pp. 19-22) provides an expert roadmap about how the response to an event would unfold, including coordination with other agencies. However, the Appendix makes clear that the agencies most likely to respond would be from within Schuyler County.

The Applicant has demonstrated, through documents that are in the record[135] that the facility will be safely designed, but if there is an incident local emergency response officials are trained to respond. Moreover, the affidavit of William Kennedy ("Kennedy Affidavit"), Schuyler County's Emergency Management Coordinator and the architect of the Appendix, concludes that Schuyler County government has adequately anticipated and addressed the risks of various activities throughout Schuyler County, including risks associated with the storage and transportation of LPG.

Despite the efforts of Harp and Lausell to minimize Mr. Kennedy's conclusions (e.g., Tr. at 129, Lines 21-24), Mr. Kennedy has stated that the County is ready for any emergency. According to Mr. Kennedy, the particular risks identified, analyzed and addressed by Schuyler County over several years culminated with completion and implementation of the Schuyler County Hazard Mitigation Plan (May 2008) ("Hazard Mitigation Plan").[136] The Hazard Mitigation Plan is a multijurisdictional plan approved by the Federal Emergency Management

[135] See, e.g., letters from Fire Chief Dominick Smith (Document I.B.6, attachment 17) and Finger Lakes LPG Storage engineer, Superior Energy Systems (Hearing Document I.B.6, attachment 14).
[136] Issues Conference Exhibit 31.

NYSDEC OHMS Document No. 201166576-00038

Agency that includes an assessment of the County's risks and vulnerabilities, a strategy for minimizing those risks, and an action plan that will be implemented to achieve the objectives.[137]

The CEMP is intended to provide a comprehensive plan "to enhance the County's ability to manage emergency/disaster situations."[138] The Appendix to the CEMP is intended to address potential transportation incidents involving hazardous materials, with the focus on LPG. The Appendix reviews "the characteristics of LPG; modes of transportation, transportation routes, potential incidents, mitigation strategies, and response guidance".[139] In his affidavit, Mr. Kennedy observes that LPG and natural gas have long been stored and transported (by pipeline, rail and truck) in Schuyler County. Kennedy Affidavit, ¶¶ 3-4. In his professional opinion,[140] Mr. Kennedy concludes that with respect to the risk of uncontrolled releases of LPG in transit or from stationary facilities, the personnel (fire services, emergency medical or otherwise) responsible for responding to the disasters and other incidents contemplated by the Hazard Mitigation Plan are adequately trained for such events. Kennedy Affidavit, ¶ 7. Moreover, the Appendix is comprehensive in its treatments in the manner in which LPG is transported and the manner in which emergency personnel in the County would respond to any incident involving LPG. Clearly, the Appendix demonstrates that the resources are available to coordinate preparedness activities and responses for incidents involving uncontrolled releases of LPG in transit or from stationary facilities. Kennedy Affidavit, ¶ 8.

Finally, the draft permit requires the Applicant to prepare an Emergency Response Plan to the satisfaction of the Department. Under this condition:

---

[137] Id. at p. 1.
[138] CEMP, p. 1.
[139] Appendix, p. 3.
[140] Mr. Kennedy has worked in the field of emergency services for 37 years, the last 12 of which has been as Coordinator of Schuyler County Emergency Management.

NYSDEC OHMS Document No. 201166576-00038

> The Permittee must install and maintain appropriate safety and emergency shutdown devices at the storage facility. Prior to the injection of any LPG into any storage cavern subject to this permit, the Permittee must provide an electronic copy of its Operations, Maintenance and Contingency Plan to the Director of the Bureau of Oil & Gas Permitting and Management in the Albany office for its review and approval. The Operations, Maintenance and Contingency Plan must include, at a minimum, the Spill Prevention and Control Manual, Hazard Communication and Assessment Program, Safety Plan and Emergency Response Plan ("ERP"). The ERP must include, at a minimum, the following elements: (i) site name, facility type, location, map, and operator information, (ii) a chain of command including the identity and contact information of a knowledgeable and qualified individual or individuals with the authority to respond to emergency situations and implement the ERP, (iii) emergency notification and reporting procedures including a list of emergency contact numbers for the area in which the facility is located, (iv) identification, description and evaluation of potential LPG and/or brine releases, fire and explosion hazards, (v) description of fire and explosion prevention procedures and equipment, (vi) implementation plans for facility evacuation and shut down, as well as release containment and disposal, and a log to record any emergency events, (vii) relevant employee and site training, and (viii) security measures including signage, lighting and fencing. The Albany office and the Region 8 Avon Mineral Resources office must be on the call list included in the ERP for any well-or storage-related emergency. All updates to the ERP must be provided in electronic form to the Director of the Bureau of Oil & Gas Permitting and Management in the Albany office within 5 business days of implementing the update.

DEC Draft Permit, November 10, 2014, Condition 7.

Given the above, there simply can be no doubt that, with the safety systems inherent in the design of the facility,[141] the safety procedures that will be implemented as part of operations (and as required under Draft Permit Condition 7), and the attestations of the emergency response professionals whose job it is to respond to even unlikely events of an accident involving LPG, there is no issue for adjudication.

[141] For a description of these safety systems, see the letters from Superior Energy (Hearing Document I.B.6, Attachments 14 and 16), as well as National Fire Protection Association (NFPA) Code 58 (Document I.B.6, Attachment 15).

D. Rail Safety

1. Rail Safety and Potential Risk Has Been Evaluated

In their petition, Harp and Lausell asserted that the DSEIS did not adequately identify and mitigate the risks involved in railroad transport of LPG to and from the proposed facility in Schuyler County. In a conclusory fashion, Harp and Lausell suggest[142] that this proposed issue is substantive and significant, but fail to identify any specific statutory or regulatory criteria that the Project will not satisfy. Moreover, their attendance at public safety committee meetings does not transform these legislators[143] into public safety and emergency preparedness experts.

Harp and Lausell start off the summary of the argument in their petition with a canard. They assert that the Project will "significantly" increase rail traffic.[144] However, the DSEIS (see Section 4.4.2, pp. 125-128) and subsequent transportation allocations submitted by Finger Lakes LPG Storage[145] make clear that Norfolk Southern's existing "local run" can handle the additional transportation of LPG rail cars. Moreover, under either potential transportation allocation, the average number of rail cars in or out of the facility would average 4.5-6.8 cars per day over a 261 day work year (assuming rail car activity only on weekdays) or if the train has the maximum 32 rail cars, a total of only 37-56 days of rail activity per year.

Harp and Lausell and other petitioners conveniently ignore numerous facts in the Record which demonstrate that transporting hazardous materials by rail is generally safe, and that the specific train movements that will occur with the Project are also safe:

- The track traversed by the Norfolk Southern train which will carry LPG cars is an FRA Class 2 track with a maximum allowable operating speed for freight trains of 25 miles per hour.

---

[142] Harp and Lausell petition, pp. 10-12.
[143] Mr. Harp was previously in law enforcement and corporate security. Mr. Lausell is a lawyer and farmer. See, e.g. Tr. at 130, Lines 13-16.
[144] Harp and Lausell petition, p. 4.
[145] See Document I.B.6, Attachment 10 and Document I.B.36.

NYSDEC OHMS Document No. 201166576-00038

- There have been no accidents of Norfolk Southern trains in New York State from 2000-2014 involving a release of hazardous materials.
- Currently, an average of 3 trains run north and south on a daily basis in the vicinity of Watkins Glen.
- Tracks and bridges are inspected regularly.
- The rail line that traverses the County through the Village of Watkins Glen currently transports various commodities, including hazardous materials such as Ethanol and Propane. See Appendix, p. 11.

See also DSEIS § 4.4.2, p. 125; § 4.4.3, p. 130. Simply put, Harp and Lausell's speculative and factually unfounded accident scenarios are not in any way supported by the safe manner in which this rail line has been operated, by the manner in which rail lines are regulated by multiple federal agencies, or by the inspection program in place. The suggestion that Norfolk Southern's special attention to a bridge (i.e., the Watkins Glen Gorge bridge structure) in any way acknowledges a possible danger is baseless. Indeed, quite to the contrary, the proximity of the bridge to the Watkins Glen State Park has resulted in additional mitigation (i.e., inspections) for the commercial rail traffic (including other hazardous materials) that already traverses this bridge.

The DSEIS, the Quest transportation QRA and the Appendix all provide statistics compiled by federal agencies that demonstrate the safety of commercial rail transport (including when LPG is transported). See DSEIS Section 4.6.2, p. 155; Quest Transportation QRA, section 4.1.2, p. 29; Appendix, p. 13. The DSEIS also describes how rail operations for the Proposed Project will be conducted (Section 4.4.1.2, pp. 121-123) and the rail safety inspection program that is in place (in coordination with the Federal Railroad administration) (Section 4.4.3, pp, 128-129), including the track inspections that are conducted on a weekly basis.

NYSDEC OHMS Document No. 201166576-00038

The rail industry has an excellent safety record. In part, this is because the rail industry is heavily regulated. The Surface Transportation Board ("STB") has broad economic regulatory oversight of freight railroads, including service and construction requirements.[146] The Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") regulates the transportation of hazardous materials.[147] PHMSA regulations are designed to achieve three goals: (i) ensure that hazardous materials are packaged and handled safely and securely during transportation; (ii) provide effective communication to transportation workers and emergency responders of the hazards of the materials being transported; and (iii) minimize the consequences of an incident should one occur. PMHSA pursues these goals by establishing rules for classification, packaging, hazard communication, incident reporting, handling and transportation of hazardous materials. In addition, PHMSA regulations require Norfolk Southern to ensure its employees are appropriately trained to handle hazardous materials. See also DSEIS Section 4.4.3, pp. 129-130.

As the Applicant noted at the issues conference (Tr. at 148), 99.9977% of all hazardous material rail shipments reach their destination without a release caused by a train accident. See also Appendix at p. 13. According to the Federal Railroad Administration's ("FRA") Office of Railroad Safety, from January 2000 to January 2015, there were only 11 accident reports in New York, with no fatalities and no accidents in Schuyler County.[148]

In connection with risk and modes of transportation, Quest evaluated the risk profile for rail transportation and assessed the potential for an accident based on the statistics from federal agencies as referenced herein. Quest found that given that there had only been 40 release

[146] See 49 U.S.C. §§ 701 (establishment of the STB) and 721 (powers of the STB).
[147] See 49 U.S.C. § 108.
[148] Railroad safety data may be found and searched on the FRA's website at http://safetydata.fra.dot.gov/officeofsafety/default.aspx

NYSDEC OHMS Document No. 201166576-00038

incidents of LPG materials from 2000-2012 nationwide representing nearly 2 billion track miles traveled, the risk due to LPG railway movements, assuming continuous public occupancy, is predicted to be approximately 2.0 x 10^{-7} per year (or one in 5,000,000 per year) on the railway, declining to **zero** at about 1,100 feet away from the rail line. See Quest Transportation QRA, pp. 29 and 49 (emphasis added).

The statistics from Norfolk Southern are consistent with this overall history of the rail industry in general. According to Norfolk Southern, it transported 531,582 carloads of hazardous materials last year (compared to roughly 350,000 carloads five years ago), while experiencing only three accidental releases involving six tank cars and non-accident releases involving 63 railcars. None of these releases involved LPG or occurred within New York, and the amount released in each case was relatively small. And, of course, the Norfolk-Southern rail line passing through the county already has LPG railcars traveling on it, so the addition of loading/unloading railcars at this facility is not a new risk to the area. See Norfolk Southern October 30, 2014 letter.

One of the concerns raised in Dr. Mackenzie's report and by Harp and Lausell (the latter with much melodrama) are the potential consequences associated with an LPG railcar accident over the Watkins Glen Gorge. The LPG railcars arriving at and departing the Finger Lakes facility will travel on the rail line that passes over the gorge. The railroad bridge is approximately 75 feet above the bottom of the gorge at its deepest section. The railroad bridge is approximately 0.1 mile long. See generally Quest Transportation QRA § 8.5.

As noted above, Quest calculated a rate of accident and release from LPG railcars. Quest also calculated a potential LPG rail car derailment rate of 2.73 x 10^{-8} per railcar-mile, or one chance of derailment in 36,630,000 per year per railcar. Quest Transportation QRA, p. 54. For

NYSDEC OHMS Document No. 201166576-00038

railcar events, there is no process equipment event that corresponds to a BLEVE (boiling liquid expanding vapor explosion). A BLEVE is typically a secondary event that is caused by an ignited release of flammable material, where the flame impinges on that or another vessel, eventually causing it to rupture catastrophically. The impinging flame provides ignition for the released material, and a fireball results. Of course, contrary to what the petitioners would suggest, this is highly unlikely to occur over the Watkins Glen bridge based on national historical data and specific experience for the last 16 years. No BLEVE events were recorded for railcars from 2000-2012. The latest BLEVE incident occurred in Dragon, Mississippi, in 1992. This extends the time period to the previous 22 years in which only one BLEVE events was reported. If a smaller total annual mileage for LPG railcars is used to account for smaller LPG activity (for years between 1992 and 2000), then the one BLEVE involving LPG materials in that 22 year period (1992-2013) results in a BLEVE frequency of 3.28×10^{-10} per railcar-mile.

Norfolk Southern has operated over this bridge without incident since 1999. The DSEIS explains (Section 4.4.3, pp. 130-131) that in 2010 the FRA established federal safety requirements for railroad bridges, requiring track owners to implement bridge management programs, which include annual inspections of railroad bridges and to audit the programs (49 C.F.R. Part 237). The 303 feet of track that is part of the Watkins Glen State Park gorge trestle bridge is inspected at least twice a week and its structure is inspected annually. See also DSEIS Section 4.4.3, pp. 130-131. Given Quest's calculations for the unlikelihood of derailment and the actual record over the last 16 years (including the transportation over this bridge of LPG tank cars), petitioners' argument that the DSEIS did not adequately identify and mitigate the risks involved in railroad transport of LPG to and from the Project is simply without any factual basis and should not be designated as an issue for adjudication.

NYSDEC OHMS Document No. 201166576-00038

2. DEC Cannot Regulate Rail Activity

Rail safety, including operational restrictions and maintenance requirements associated with rail bridges used in interstate commerce, is exclusively a matter of federal jurisdiction. Because rail safety is outside of the Department's jurisdiction, alleged rail safety issues cannot be adjudicated in this proceeding. As noted above, DEC decisions and New York case law reiterate the rule that "SEQRA does not alter the jurisdiction between or among state agencies". See, e.g., Green Mountain R.R. Corp. v. Vermont, 404 F.3d 638, 642 (2d Cir. 2005) (citing 49 U.S.C. § 10501); Erie Boulevard Hydropower, L.P. v. Stuyvesant Falls Hydro Corp., 30 A.D.3d 641, 645 (3d Dep't 2006) (citing numerous cases for this proposition); Croton Watershed Clean Water Coalition Inc. v. Planning Bd. of Town of Southeast, 5 Misc. 3d 1010(A), 1010A (N.Y. Sup. Ct. 2004); William E. Dailey, Inc., Administrative Law Judge Rulings On Issues And Party Status And Order Of Adjudicatory Proceedings, 1995 N.Y. ENV LEXIS 55 (NYSDEC 1995); CWM Industries, LLC, Administrative Law Judge Ruling On Issues, Party Status And Environmental Significance And Order Of Disposition, 2009 N.Y. ENV LEXIS 12 (NYSDEC 2009). This applies equally to federal agencies. Nevertheless, the DEC, or the relevant SEQRA agency, in making the necessary findings under SEQRA, including weighing mitigation for any potential impacts, may certainly rely on the expertise of other agencies and the regulatory program in effect to address such potential impacts, to an extent that does not amount to delegation or deferral of responsibility. Croton Watershed Clean Water Coalition, 5 Misc. 3d at 1010(A)("…merely relying on the expertise of other agencies which are involved in the SEQRA process, while fully retaining and exercising its role as lead agency in assessing environmental impacts, did not result in a delegation or deferral of responsibility").

NYSDEC OHMS Document No. 201166576-00038

IX. Noise

Gas Free Seneca was the only petitioner to raise noise as an issue. In its petition, it raised four primary deficiencies relating to: (1) the "region of influence" for conducting a noise analysis; (2) the Applicant's alleged failure to evaluate impacts with this "region of influence," including on the eastern side of Seneca Lake; (3) the monitoring and reporting of "baseline" noise levels; and (4) the omission of an analysis of effective mitigation measures.[149] However, its offer of proof fails to raise an adjudicable issue, particularly given its burden of persuasion, the mitigation provided in the form of a permit condition that requires noise monitoring and, as explained below, additional assurances the Applicant is willing to provide related to construction noise. Moreover, there is ample information in the Record to demonstrate that a "hard look" has been taken at potential noise impacts and appropriate measures incorporated into the design of the Project to further minimize and mitigate such impacts.

A. The Department's Noise Policy and SEQRA

Since its issuance in 2000, the Department's Program Policy on Assessing and Mitigating Noise Impacts, DEP-00-1 ("Noise Policy") has been applied to numerous projects evaluated by DEC (including at the hearing stage). Saint Lawrence Cement Company, LLC, First Interim Decision, 2002 N.Y. ENV LEXIS 61 (NYSDEC 2002); Seneca Meadows, Inc., Rulings of the ALJ on Issues and Party Status, 2012 N.Y. ENV LEXIS 15 (NYSDEC 2012); CWM Industries, LLC, Ruling on Issues, Party Status and Environmental Significance and Order of Disposition, 2009 N.Y. ENV LEXIS 12; Cobleskill Stone Products, Inc., Ruling on Issues and Party Status, 2008 N.Y. ENV LEXIS 47 (NYSDEC 2008); NYC Department of Sanitation (East 91st Street Marine Transfer Station), Ruling on Issues and Party Status, 2008 N.Y. ENV LEXIS 21 (NYSDEC 2008); Red Wing Properties, Inc., Ruling on Issues and Party Status, 2008 N.Y. ENV

[149] Gas Free Seneca petition, at pp. 14-15.

NYSDEC OHMS Document No. 201166576-00038

LEXIS 13 (NYSDEC 2008); Crossroads Ventures, LLC, Ruling 3, Ruling on Issues and Party Status, 2005 N.Y. ENV LEXIS 53 (NYSDEC 2005); NYC Department of Sanitation (Spring Creek Yard Waste Composting Facility), Supplemental Ruling, 2005 N.Y. ENV LEXIS 9 (NYSDEC 2005); Metro Recycling & Crushing, Inc., Ruling, August 7, 2003; Saint Lawrence Cement Company, LLC, Initial Ruling, 2001 N.Y. ENV LEXIS 50 (NYSDEC 2001); Jointa Galusha, LLC, Ruling 2, Ruling on Issues and Party Status, 2001 N.Y. ENV LEXIS 40 (NYSDEC 2001); Palumbo Block Company, Inc., Ruling 3, Ruling on Issues and Party Status, 2001 N.Y. ENV LEXIS 14 (NYSDEC 2001). In no case has the ALJ or Commissioner determined that the Noise Policy does not apply. While not a regulation or law, the Noise Policy was prepared:

> To provide direction to the staff of the Department of Environmental Conservation for the evaluation of sound levels and characteristics (such as pitch and duration) generated from proposed or existing facilities. This guidance also serves to identify when noise levels may cause a significant environmental impact and gives methods for noise impact assessment, avoidance, and reduction measures. These methods can serve as a reference to applicants preparing environmental assessments in support of an application for a permit. Additionally, this guidance explains the Department's regulatory authority for undertaking noise evaluations and for imposing conditions for noise mitigation measures in the agency's approval of permits for various types of facilities pursuant to regulatory program regulations and the State Environmental Quality Review Act (SEQR).

The Noise Policy also, in several locations, identifies the proper "zone of influence" in terms of assessing noise impacts. For example, the Noise Policy properly notes that "[w]hen lands adjoining an existing or proposed facility contain residential, commercial, institutional or recreational uses that are proximal to the facility, noise is likely to be a matter of concern to residents or users of adjacent lands." Noise Policy, p. 2. In the context of describing how an impact assessment should be performed, the Noise Policy notes that the "[a]ppropriate receptor locations may be either at the property line of the parcel on which the facility is located or at the

NYSDEC OHMS Document No. 201166576-00038

location of use or inhabitance on adjacent property." Noise Policy, p. 13; See also Dalrymple Gravel & Contracting Company, Inc., Commissioner's Decision, 2003 N.Y. ENV LEXIS 56, at *45 (NYSDEC 2003) (The Department's Noise Policy statement that "'appropriate receptor locations may be either at the property line of the parcel on which the facility is located or at the location of use or inhabitance on adjacent property'" means that "either the property line of the proposed project can be used, or if appropriate to the circumstances, receptors can be located upon *adjacent* properties at points remote from the property line, if the actual use of the *adjacent* property is at some distance from the property line.") (emphasis original); Seneca Meadows, 2012 N.Y. ENV LEXIS 15, at *111 ("Modeling was employed to assess the noise environment around the project site over the life of the mine.") (emphasis added).

According to the Noise Policy, the goal for any permitted operation should be to minimize increases in sound pressure level above ambient levels at chosen points of sound reception. This means that, in non-industrial settings, the sound pressure level should probably not exceed ambient noise at any receptor by more than 6 dB(A), the threshold above which complaints may be generated, although the policy acknowledges that greater increases might be acceptable under certain situations. Furthermore, the policy states that the addition of any noise source, in a non-industrial setting, should not raise the ambient noise level above a maximum of 65 dB(A), the "upper end" limit that allows for undisturbed speech at a distance of approximately three feet. See Noise Policy, pp. 13 and 14. Finger Lakes LPG Storage will comply with both of these standards.

Under SEQRA, noise is an aspect of the "environment," and a substantial adverse change in existing noise levels is among the indicators of a significant, adverse impact on the environment. 6 NYCRR §§ 617.2(l) and 617.7(c)(1)(i). St. Lawrence Cement Co., LLC, 2001

NYSDEC OHMS Document No. 201166576-00038

N.Y. ENV LEXIS 50, at *199.[150] Therefore, the Noise Policy is a guide for how the Department should evaluate compliance with SEQRA. Thus, under the Noise Policy, the environmental analyst, acting as project manager for the review of applications for permits is responsible for ensuring that sound generation and noise emanating from proposed facilities are properly evaluated. For new permits there should be a determination as to the potential for noise impacts, and establishment of the requirements for noise impact assessment to be included in the application for permit. Noise Policy, at p. 5. According to the Noise Policy, the results of noise impact evaluations and the effectiveness of mitigation measures shall be incorporated into SEQRA documents and, where necessary, permit conditions shall be placed in final permits to ensure effective noise control. See Noise Policy, at p. 5.

The SEQRA regulations (6 NYCRR § 617.11(d)(5)) require that the Department, in its role as lead agency, certify that "the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable." Thus, any examination of noise impacts is to be made in the context of the environmental setting of the proposed project. It is not merely an exercise in the nature, physics, propagation and attenuation of sound. Rather, it is an examination of these factors as applied to and as impacting the environment wherein the proposed project is located. See Dalrymple, 2003 N.Y. ENV LEXIS 56, at *47.

[150] Unlike in solid waste matters, for example, there is no specific regulation dealing with noise for the proposed facility.

NYSDEC OHMS Document No. 201166576-00038

B. Other Relevant Noise Standards

While the Noise Policy provides the definitive guideline to establish no significant adverse impact under SEQRA (i.e., maximum of 65 dBA and/or no exceedance of ambient >6 dBA), New York has other means of regulating the noise from motor vehicles (e.g., to be utilized during construction); however, such regulation applies equally to all such vehicles and not a result of a particular project. New York Vehicle and Traffic Law ("V&TL") and DEC regulations both contain decibel limits regarding motor vehicles. Under V&TL § 386, motor vehicles (including trucks) with a weight in excess of 10,000 pounds may not exceed 86 dBA at 50 feet if the speed of the vehicle is 35 mph or less or 90 dBA if the speed is greater. The DEC's regulations are similar, with a range of allowable decibel levels from 84 to 95, depending on the speed of the vehicle and the type of ground surface at the receptor location. See 6 NYCRR Part 450. In the case of the Finger Lakes LPG Storage Project, Hunt Engineers ("Hunt"), the Applicant's expert, found that a significant contributor to the background noise was that from NYS Route 14. Ambient sound measured at the 5 receptors was still significantly less than the sound levels permitted under New York State law and DEC regulations.

With regard to rail noise, the U.S. Department of Transportation handbook "Handbook for the Measurement, Analysis, and Abatement of Railroad Noise," October 2009, provides an overview of Federal Railroad Administration noise regulations and compliance measurements. The noise emissions from railroad line haul and yard operations are governed by two complementary rules: (1) the Environmental Protection Agency's 40 CFR Part 201 – Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers and (2) the Federal Railroad Administration's 49 CFR Part 210 - Railroad Noise Emission Compliance Regulations. For stationary locomotives manufactured after December 31, 1979, the noise standard is 87 dB at any throttle setting except idle. The standard for an idle throttle setting is 70

NYSDEC OHMS Document No. 201166576-00038

dB. (See 40 CFR 201.11(b) and 49 CFR Part 210 Appendix A.) The standard for locomotive operation under moving conditions is 90 dB. (See 40 CFR 201.12(b) and 49 CFR Part 210 Appendix A.)

To put the above into perspective, the Noise Policy provides a chart of typical everyday sounds and noises with a decibel level. See Noise Policy, p. 19. Using this chart and certainly in the context of what is permitted as sound levels for tracks and trains, the sound emanating from the Proposed Project is classified as quiet and therefore will not result in adverse impacts under SEQRA.

C. Hunt's Noise Studies

As part of the preparation of the DSEIS and the SEQRA process, Department staff requested that Finger Lakes LPG Storage prepare a noise analysis. Based on an iterative process of comments and discussions with Department staff, the noise analysis was prepared by Hunt and finalized in 2011 and revised in 2013. See DSEIS Appendix I and Document I.B.32. In Hunt's report, receptor locations were identified near the project site as recommended by the Noise Policy, and ambient sound levels were measured at the property line, or if permission was granted on the property of the receptors. These locations were selected because they were nearby sensitive receptors, and if no adverse impacts were found at these locations it could be assumed that there would be no adverse impacts beyond these receptors.

The recording locations were set up between the receptor and sound source as this location would have the most potential for impacts. The exception to this was the receptor located near the hotel on NYS Route 14 where noise levels were recorded on the opposite side of the building (closest to the road). This difference was identified in a subsequent sound analysis

NYSDEC OHMS Document No. 201166576-00038

performed for the adjacent Arlington Storage Gallery 2 Project and the calculations were adjusted in the March 7, 2014 memo from Hunt.[151]

As requested by the Department in its April 28, 2011 DSEIS comments,[152] the ambient sound levels were established using the equivalent sound level Leq, which, according to the Noise Policy, "provides an indication of the effects of sound on people. It is also useful in establishing the ambient sound levels at a potential noise source." Noise Policy, p. 7. Based on comments from the DEC and subsequent conversations, it was determined hour-long intervals would be acceptable. It was also required that night time ambient levels be estimated. To accomplish this, a sample measurement was taken at two locations and the remaining receptors were estimated from these values.

Moreover, in the Final Scoping Outline prepared by the DEC (Document IV.D.22), it was requested that potential impacts associated with the operation of the Project, including truck/rail terminal operations, be identified and discussed. To establish the proposed sound levels, measurements were taken at Crestwood's LPG facility in Savona, New York, with the vehicles undergoing typical working activities. This included idling, backup alarms, engines running at high levels and train yard activities. The measurements were taken at 50 feet. Measurements were taken for both the equivalent sound level over a period of time, as well as the maximum sound levels observed during the various time periods. To evaluate these sounds at a distance, the train activities were measured at a distance of 800 feet from the source. For the proposed pumps, manufacturer data was used.

To determine the potential for adverse impacts, a first order analysis was performed in accordance with the Noise Policy. See Noise Policy, at pp. 16-20. This analysis involved taking

[151] See Document I.B.32.
[152] Document IV.B.1.

NYSDEC OHMS Document No. 201166576-00038

only the sound reduction over distance into account. This is a conservative approach to determine if further analysis is required including accounting for topography, ground cover, and mitigation methods. Environmental conditions such as wind, temperature and humidity were omitted from the analysis, as the Noise Policy specifically mentions that these are highly variable and should not be taken into account.

Based upon this first order analysis, Hunt determined that the sound sources would be unnoticeable to tolerable at the majority of the receptors. This conclusion was based on comparing the proposed equivalent sound level to the existing ambient sound level. The exceptions to these findings were noted as follows:

- At the unloading facility, the property boundary adjacent to a truck work shop (including for LPG trucks) could see increased ambient sound levels of 6 dB(A) which could be considered intrusive. However, since this is a repair facility and is not a sensitive receptor, Hunt concluded reasonably that this would not cause any adverse impacts.[153]

- The fire pump located on the lakeshore had the potential for adverse impacts. This source will only generate sound during emergency situations and twice yearly during required testing activities. Because of this, Hunt concluded reasonably that it would not cause any long term adverse conditions. Nevertheless, to further mitigate the potential for impacts, the Applicant agreed that the pumps will be placed in an enclosure with sound absorbing material such as cinder blocks, which will reduce the sound to a level that is not objectionable.

- Based on the revised ambient sound levels at the motel receptor, the pumps located at the brine pond had the potential for adverse impacts. To properly evaluate these impacts, the anticipated sound level was calculated using reductions for distance, vegetation, and an enclosure. Although the exact building construction was not known at the time, a conservative estimate of an 8 dB(A) reduction for the enclosure was used in the calculations, even though solid walls have the potential for reductions of up to 40 dB(A).

Based upon the foregoing, Hunt properly concluded that no adverse impacts are expected and it was not necessary to analyze additional mitigation measures for the Project. If the

[153] In addition, the truck facility has written a letter in support of the Project. See **Exhibit 7**.

NYSDEC OHMS Document No. 201166576-00038

reductions for vegetation and topography, as well as any mitigation measures, were to be taken into account, the calculated sound levels would be much lower.

D. Construction Noise

With regard to construction, Hunt's report noted that the construction of the improvements on the project site is typical of activities which occur throughout the construction season. There are no receptors requiring quiet conditions, such as a school or church near the project site. Because this noise is not out of character and is temporary in nature, Hunt concluded that there would be no adverse impacts and the construction noise was not necessary to be analyzed. Nevertheless, the Applicant proposes to limit the hours when construction can occur and has prepared a draft permit condition to this effect. See **Exhibit 8**.[154]

The Department has determined that limiting the hours of the loudest activities at a facility is an appropriate method of reducing noise impacts. Noise Policy, at pp. 23-24. NYC Department of Sanitation (Spring Creek Yard Waste Composting Facility), Supplemental Ruling, 2005 N.Y. ENV LEXIS 9, at *21; Jointa Galusha, LLC, Ruling 2, 2001 N.Y. ENV LEXIS 40, at *30. By limiting construction hours, the permit would include mitigation as it relates to potential construction noise in addition to the initially proposed condition requiring noise monitoring. Under the existing condition, if sound survey results exceed certain ambient levels, the Applicant is responsible for recommending additional mitigation measures (the condition identifies potential mitigation measures) and a schedule for implementation. These additional mitigation measures must be shown to be effective through a follow-up sound survey. See Draft Permit, Exhibit 12, pp. 16-17.

[154] Finger Lakes LPG Storage has discussed this condition with Department staff and Department staff is in agreement that this condition can be added to the permit.

NYSDEC OHMS Document No. 201166576-00038

E. Gas Free Seneca's Noise Report is Flawed and is Not Reliable

In contrast to Hunt's reports, the noise report presented in Gas Free Seneca's petition (the "Sandstone Report") is flawed, not supported by credible authority (lacks a scientific foundation), and is contrary to the DEC Noise Policy and DEC administrative precedent. More specifically, the Sandstone report ignored reality by suggesting, without any supporting precedent, a "regional of influence" for purposes of evaluating noise impacts that goes well beyond what is required to be studied, made inappropriate leaps of faith about what can possibly be heard across the Lake, and failed to demonstrate that the noise that the Project will generate would not be out of character for its surrounding receptors. For these reasons, Gas Free Seneca has failed to satisfy its burden to demonstrate that there is an adjudicable noise issue.

At the issues conference, Gas Free Seneca focused on two points: 1) the appropriate "region of influence"; and (2) construction noise.[155] (Tr. at 392). In attempting to buttress Sandstone's review, Gas Free Seneca argued at the issues conference that its assessment was "consistent with DEC noise guidance." (Tr. at 393). In attempting to expand this unprecedented "region of influence" approach, Gas Free Seneca critiqued Hunt's report by erroneously suggesting that Hunt only analyzed on-site noise sources, whereas Gas Free Seneca asserted that noise from truck and rail all the way to Geneva should have been modeled. (Tr. at 394). There is absolutely no precedent for such an approach. In any event, it is nonsensical given that such sources of noise already exist, that there are state laws and regulations regulating truck noise,[156] and federal regulations regulating train noise.[157]

There are several fundamental errors in Sandstone's report and other elements of the report that defy credibility. First, as noted above, there is no administrative precedent or

[155] Construction noise is addressed above.
[156] See Section IX. B, supra.
[157] Id.

NYSDEC OHMS Document No. 201166576-00038

anything in the Noise Policy to support the broad "region of influence" that Sandstone suggests in its report. Sandstone's "region of influence" is contrary to the Noise Policy in terms of what the appropriate receptor locations should be – that is at the property line or at the location of the use or inhabitance on adjacent property.[158] Noise Policy, p. 13. While the Town of Reading does not have a local noise ordinance, the deference given to such ordinances in previous administrative decisions of the Department strongly suggests that the immediate area around where the noise will be generated is most relevant. See, e.g., St. Lawrence Cement Company, 2002 N.Y. ENV LEXIS at 61; Dalrymple Gravel & Contracting, Ruling on Issues, September 25, 2001.

Hunt's report correctly defines the "region of influence" as the nearby sensitive receptors which could experience adverse impacts are immediately adjacent to the project site. The "region of influence" excludes the eastern shore of Seneca Lake, which is the focus of the Sandstone report, as the onsite activities associated with the Project would not be expected to have any adverse impacts on the western shore. So any effects of sound over water are inapplicable and speculative.

The noise monitoring performed by Sandstone is also flawed. First, Sandstone does not indicate the measurement time periods, and the noise monitoring results paragraph of the report admits that the measurements were limited.[159] Second, the report does not describe how "Normal Background" was calculated or measured and does not give a specific value for the background even though it is quantitatively used later in the report. In addition, the noise

[158] It is also contrary to work Sandstone itself has done when representing developers. See Sandstone's noise report for the Chappaqua Crossing project at http://mynewcastle.org/index.php/chappaqua-news/currentprojects/chappaqua-crossing/339-seis-proposed-project-petition. If Sandstone had used the standards it applied for the Chappaqua Crossing report, it would have had no issue with Hunt's report or the conclusions stated therein. This alone raises questions about the credibility of Sandstone's report.

[159] Sandstone Report, at p. 7

measurements do not provide an accurate or credible picture of the overall ambient sound level at the receptor locations. Specific information omitted is:

- An Average sound level, recommended for use by the NYSDEC in noise evaluations.
- Minimum and Maximum sound levels, only ranges of specific sound sources.
- There is no descriptor of other traffic sources, if the theoretical background of 20dB(A) was valid, traffic noise would be audible from both NYS Rte 14 and NYS Rte 414 directly east of the receptor location. Does not describe how measurements were identified as northbound trucks on NYS Rte 14. The receptor locations are approximately 2.5 miles away and do not have a line of sight.

Further, the noise monitoring results were taken when ambient sound levels are typically at their lowest. It is also obvious that Sandstone's measurements at its locations A and B were taken when no traffic, boating or other activity was present.

Sandstone did evaluate existing noise on the west side of the Seneca Lake and concluded that "existing transportation and industrial[160] noise originating in Reading is up to 30 dBA higher than the natural background in Hector." However, the noise study required to evaluate impacts from this Project must look at any incremental increase of such differences. As long as the incremental increase[161] is less than 6 decibels, or less than 65 dBA, there is no impact under SEQRA. This is exactly what Hunt has demonstrated in its report. This is supported by how "environmental setting" is defined in the SEQRA Handbook ("Environment setting of an action includes the existing environment, any existing uses of the project site, and a general characterization of adjoining areas"). See SEQRA Handbook, p. 123. Thus, the impacts evaluated in a DSEIS should use the discussion of the environmental setting as a basis for comparison. Id.

[160] The Sandstone report does not provide an adequate description of "Industrial".
[161] Gas Free Seneca's argument that Hunt seems to be suggesting that a noise analysis would never be required if there is existing truck and train activities in the vicinity of a Project is without merit. Tr. at 396.

NYSDEC OHMS Document No. 201166576-00038

During the issues conference, the ALJ asked whether Seneca Lake should be taken into consideration in Hunt's noise analysis. The simple answer is no.[162] When the lake is occupied, with boaters or even swimmers, the noise from that activity alone will approach the maximum sound levels from the proposed facility.[163] The focus on any noise study is what impact a facility will have on nearby receptors, particularly residents. The location of where the train will be operating as part of this Project is over two miles from the eastern shore of the lake.[164] Still, as further assurance that there will be no impacts to nearby receptors, the draft permit contains a noise monitoring requirement and requires Finger Lakes LPG Storage to provide for mitigation if for some reason the anticipated noise monitoring results exceed the ambient noise levels by more than 6 dB.

In summary, Gas Free Seneca failed to raise an adjudicable noise issue. Its suggestion that noise impacts must be evaluated beyond those receptors that are adjacent to a proposed project is not supported by administrative precedent or the Noise Policy. Moreover, the report it submitted in support of its petition is unrealistic, lacks credibility given some of the measurements it did make, and fails to rebut the reports submitted by the expert of Finger Lake LPG Gas Storage. Finally, the draft permit contains a condition to ensure that the predictions made by the Applicant's expert are met and if not Finger Lakes LPG Storage will be required to implement additional mitigation. A condition related to construction noise further closes the door on any potential issue, even with regard to this temporary impact.

---

[162] FERC also considered noise impacts in connection with its review under NEPA of the Arlington Storage facility. 147 ¶ 61,120 at PP 70-71. Like here, Gas Free Seneca also raised the prospect of noise from that facility (combined with noise from the Finger Lakes LPG facility) reaching across the lake. In response, FERC focused on the fact that the noise study results in that proceeding demonstrated that there would be minimal impact at the nearest noise sensitive areas. While acknowledging that there could be a minimal increase in ambient noise levels across the lake, FERC found that other competing noise sources would not significantly impact residents or other individuals within the project area. 147 ¶ 61,120 at P 71.

[163] Sandstone's report even asserts that in windy conditions water lapping at the shore could be as loud as 52 decibels.

[164] See Sandstone Report, Appendix 7.2.3.

NYSDEC OHMS Document No. 201166576-00038

X. Conclusion

To satisfy a petitioner's burden of proof, a petition for either full party or amicus status must identify an issue that satisfies the standards for adjudication under 6 NYCRR § 624.4(c). 6 NYCRR § 624.5(b)(2)(i), (b)(3)(i). Because the petitioners requesting full party status and the petitioners requesting amicus status have failed to identify any adjudicable issues with regards to the sufficiency of the DSEIS's analysis of the Project's community character impacts, alternatives, or cumulative impacts, the indemnification provisions of Draft Permit Condition 9, cavern integrity, water quality impacts, public safety and emergency preparedness, and noise, those petitions must be denied.[165]

Respectfully Submitted,

Kevin M. Bernstein
BOND, SCHOENECK & KING, PLLC
One Lincoln Center
Syracuse, New York 13202
(315) 218-8329

Robert J. Alessi
DLA PIPER LLP (U.S.)
677 Broadway – Suite 1205
Albany, New York 12207
(518) 788-9708

Co-Counsel, Finger Lakes LPG Storage, LLC

Dated: April 17, 2015

[165] Finger Lakes LPG Storage reserves the right to supplement, revise, or extend the information and arguments included and referenced in this document.

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 1

NYSDEC OHMS Document No. 201466576-00038

[¶ 61,120]

Arlington Storage Company, LLC, Docket No. CP13-83-000

Order Issuing Certificate and Reaffirming Market-Based Rates

(Issued May 15, 2014)

Before Commissioners: Cheryl A. LaFleur, Acting Chairman; Philip D. Moeller, John R. Norris, and Tony Clark.

1. On February 26, 2013, Arlington Storage Company, LLC (Arlington) filed an application pursuant to section 7(c) of the Natural Gas Act (NGA)[1] and Part 157 of the Commission's regulations[2] for authorization to expand its Seneca Lake Storage Project (Seneca Lake Project), located in Schuyler County, New York. The proposed expansion project, referred to as the Gallery 2 Expansion Project (Gallery 2 Project), involves the conversion of two interconnected bedded salt caverns (collectively known as Gallery 2), previously used for liquefied petroleum gas (LPG) storage, to natural gas storage. The Gallery 2 Project would increase the working gas capacity of Seneca Lake Project from 1.45 billion cubic feet (Bcf) to 2.00 Bcf. Arlington also requests the Commission to reaffirm Arlington's authorization to charge market-based rates for its firm and interruptible storage and hub services.

2. The Commission grants the requested certificate authorization, subject to the conditions described herein. The Commission also approves Arlington's request to reaffirm its market-based rate authority, as more fully discussed and conditioned below.

I. Background

3. Arlington, a wholly-owned subsidiary of Crestwood Equity Partners LP (Crestwood),[3] is a natural gas company organized and existing under the laws of Delaware and is a developer of underground natural gas storage facilities in New York. Arlington offers firm and interruptible natural gas storage services in interstate commerce through the Seneca Lake Project.[4] The Seneca Lake Project is located in Schuyler County, New York, on property owned by Arlington and abutted by property owned by Arlington's affiliate, U.S. Salt, LLC, (U.S. Salt) a salt mining company. The Seneca Lake Project interconnects with Dominion Transmission, Inc. and Millennium Pipeline Company, LLC, interstate pipeline systems.

A. *Proposal*

4. The Seneca Lake Project, which is within the Watkins Glen Brine Field, currently consists of two, interconnected, bedded salt caverns, known as Gallery 1, connected to a compressor station by a 16-inch-diameter pipeline. The Seneca Lake Project has a working gas capacity of 1.45 Bcf, with maximum daily injection and withdrawal capabilities of 72,500 dekatherms (Dth) per day and 145,000 Dth per day, respectively.

5. Arlington proposes to expand its Seneca Lake Project by converting two other existing interconnected bedded salt caverns, Gallery 2, previously used for LPG storage, to natural gas storage service. When the conversion is complete, the Gallery 2 caverns will have a total working gas capacity of approximately 0.55 Bcf, resulting in the Seneca Lake Project having a total working gas capacity of 2.00 Bcf and a total natural gas storage capacity of 3.09 Bcf. Arlington does not propose to change its certificated maximum daily injection or withdrawal rates.

6. The Gallery 2 Project construction and operation will occur on lands owned by Arlington. As part of the expansion project Arlington proposes to: (1) construct approximately 170 feet of 16-inch-diameter pipeline and 330 feet of 8-inch-diameter pipeline to connect Well Nos. 30A and 31A to its existing 16-inch-diameter pipeline; (2) install a 400 horsepower (hp) electric motor-driven compressor, near the Gallery 2 wellheads, to be used for gas injections during the debrining process and to achieve the maximum allowable operating pressure (MAOP) on injections once the caverns are placed into natural gas storage service; (3) construct temporary debrining facilities, consisting of a 75 hp electric motor brine pump and brine pipeline; (4) install electric and instrument air lines connecting the Gallery 2 caverns to the Seneca Lake Project compressor station; and (5) use Cavern Well No. 45 for debrining and future monitoring of the caverns.[5]

7. Currently, the Gallery 2 caverns have five existing wellheads, Cavern Well Nos. 30, 30A, 31, 31A, and 45 but Arlington will only use 30A and

---

[1] 15 U.S.C. § 717f (c) (2012).

[2] 18 C.F.R. Part 157 (2013).

[3] In May 2013, Crestwood acquired Inergy, LP, previous parent company of Arlington.

[4] Arlington received Commission authorization to acquire the Seneca Lake Project in 2010, and completed its acquisition in 2011. *Arlington Storage Co., LLC*, 132 FERC ¶ 61,171 (2010) (2010 Order).

[5] We note that Arlington also requested authorization to plug and abandon two of its existing wells (Well Nos. 30 and 31) which were formerly used in the operation of the Gallery 2 caverns' brine production and LPG storage operation. Since these wells were never certificated or used for jurisdictional purposes, no abandonment authorization is required.

NYSDEC OHMS Document No. 201166576-00038

31A as injection/withdrawal wells, and Cavern well No. 45 as the observation well for the Gallery 2 Project. Cavern Well Nos. 30 and 31 will be permanently plugged and abandoned.[6] As noted above, Cavern Well No. 45 will be initially used to debrine Gallery 2 and be used as an observation well going forward. In 2012, Arlington drilled Cavern Well Nos. 30A and 31A prior to the filing of this application, mistakenly assuming it was acting under its blanket certificate authority.[7] Arlington now asks for certification of these wells as part of the Gallery 2 Project.

8. The Gallery 2 caverns are currently full of brine. The debrining process involves injecting natural gas into Well Nos. 30A and 31A to displace the brine from the caverns through Cavern Well No. 45. Arlington estimates that it will remove one million barrels of brine from Gallery 2. The brine will be conveyed to U.S. Salt's existing brine processing facilities through Arlington's proposed temporary brine pipeline.

9. Arlington states that the Gallery 2 Project will increase the Seneca Lake Project's high deliverability gas storage capacity by roughly one-third. Arlington contends that the added storage capacity will enhance reliability by allowing more gas to be delivered from storage directly into a highly weather-sensitive market area on peak days.

10. Arlington held a non-binding open season from March 5 to March 29, 2013, for 0.55 Bcf of expansion firm storage capacity at the Seneca Lake Project.[8] Arlington received expressions of interest from six prospective customers in the total amount of 6.2 Bcf, more than eleven times the amount of firm storage capacity offered.[9] Arlington states that it is evaluating the open season results and plans to commence negotiations for rates and terms of service with qualified prospective customers.[10]

B. *Requests for Waivers*

11. Because it requests affirmation of its market-based rate authority, Arlington requests that the Commission waive certain filing, accounting, and reporting requirements including: (1) section 157.6(b)(8) (applicants to submit cost and revenue data); (2) sections 157.14(a)(13), (14), (16), and (17) (cost-based exhibits); (3) section 157.14(a)(10) (gas supply data); (4) the accounting and reporting requirements of Part 201 and sections 260.1 and 260.2 (Form Nos. 2 and 2A); (5) section 284.7(e) (reservation charge); and (6) section 284.10 (straight fixed-variable rate design methodology).

II. Notice, Interventions, and Comments

12. Notice of Arlington's application was published in the *Federal Register* on March 12, 2013 (78 *Fed. Reg.* 15,712). Timely, unopposed motions to intervene and comments in opposition were filed by the Damascus Citizens for Sustainability, Inc., GasFree Seneca,[11] and NYH20, Inc. Timely, unopposed motions to intervene are granted by operation of Rule 214 of the Commission's Rules of Practice and Procedure.[12] Over 400 people filed comments in opposition to the project. Many of these comments were specifically about an adjacent, non-jurisdictional LPG project (Finger Lakes Project) proposed by Finger Lakes LPG Gas Storage, LLC, an affiliate of Arlington. That project is under evaluation by the New York State Department of Environmental Conservation (NYSDEC).[13] While the Gallery 2 Project is not associated with the Finger Lakes Project, the two projects are proposed to be located in the same salt formation.

13. The New York Public Service Commission, Pivotal Utility Holdings, PSEG Resources & Trade, LLC, and Peter King filed untimely motions to intervene. Mr. King included comments with his motion to intervene, raising environmental issues. We will grant these late-filed motions to intervene, since to do so at this stage of the proceeding will not unduly delay, disrupt, or otherwise prejudice the proceeding or other parties.[14]

III. Discussion

14. Since the proposed facilities will be used to transport natural gas in interstate commerce, subject to the jurisdiction of the Commission, the construction and operation of the facilities are subject to the sections 7(c) and (e) of the NGA and to the Commission's regulations.[15]

---

[6] Cavern Well Nos. 30, 31, and 45 were plugged in 1989 when LPG service was discontinued, Footnote 2 of application. Arlington reopened the wells for the purpose of evaluating each well's suitability for use in natural gas operation.

[7] Inasmuch as Arlington's construction actions associated with the Gallery 2 expansion were carried out without appropriate authorization from the Commission, we find that Arlington violated section 7(c) of the NGA and its Part 157 blanket construction certificate issued in Docket No. CP10-99-000. However, since Arlington acted in good faith based on its incorrect interpretation of the existing regulations and neither customers nor the environment were harmed by the activities, we find that no enforcement action is necessary with respect to the prior activities.

[8] In conjunction with its open season, Arlington also provided customers that hold firm storage service agreements with the Seneca Lake Project an opportunity to turn back capacity, but received no requests to do so.

[9] Arlington's June 3, 2013 Response to Staff's Engineering and Rates Data Request at 8, response (b).

[10] Arlington's April 10, 2013 Response to Initial Round of Comments on Application at Attachment A, Submission of Open Season Results.

[11] Earthjustice files on behalf of Gas Free Seneca.

[12] 18 C.F.R. §385.214(c) (2013).

[13] NYSDEC filed a motion to intervene but withdrew its intervention on April 26, 2013 when it asked for Cooperating Agency Status.

[14] *See* 18 C.F.R. §385.214(d) (2013).

[15] 15 U.S.C. §717f (2012).

NYSDEC OHMS Document No: 201166576-00038

A. *Certificate Policy Statement*

15. The Commission's Certificate Policy Statement provides guidance as to how we will evaluate proposals for new construction.[16] The Certificate Policy Statement establishes criteria for determining whether there is a need for a proposed project and whether the proposed project will serve the public interest. The Certificate Policy Statement explains that in deciding whether to authorize the construction of major new natural gas facilities, the Commission balances the public benefits against the potential adverse consequences. The Commission's goal is to give appropriate consideration to the enhancement of competitive transportation alternatives, the possibility of overbuilding, subsidization by existing customers, the applicant's responsibility for unsubscribed capacity, the avoidance of unnecessary disruptions of the environment, and the unneeded exercise of eminent domain in evaluating construction of new natural gas facilities.

16. Under this policy, the threshold requirement for natural gas companies proposing new projects is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. The next step is to determine whether the applicant has made efforts to eliminate or minimize any adverse effects the project might have on the applicant's existing customers, existing storage facilities in the market and their captive customers, or landowners and communities affected by the construction. If residual adverse effects on these interest groups are identified after efforts have been made to minimize them, the Commission will evaluate the project by balancing the evidence of public benefits to be achieved against the residual adverse effects. This is essentially an economic test. Only when the benefits outweigh the adverse effects on economic interests will the Commission proceed to complete the environmental analysis where other interests are considered.

17. As indicated above, the threshold requirement under the Certificate Policy Statement is that the applicant must be prepared to financially support the project without relying on subsidization from its existing customers. As authorized below, Arlington will provide services from the Gallery 2 Project at market-based rates. As a consequence, Arlington will assume all financial risk associated with the operation of Gallery 2 at the Seneca Lake Facility and there can be no subsidization of the new service by any existing customers. Thus, the Commission finds that Arlington has satisfied the no subsidy threshold requirement of the Certificate Policy Statement.

18. The Gallery 2 Project will not have adverse impacts on existing storage facilities or their customers, since the project is located in a competitive market area in which competitive alternatives exist. With respect to the project's impacts on landowners and communities, Arlington states in its application that all construction and operation of the project will be located on lands owned by Arlington, and surrounded by lands owned by Arlington's affiliate, U.S. Salt.[17] Arlington asserts that all project facilities are located well away from property of adjacent landowners and from any noise sensitive areas.[18] Furthermore, as discussed below, the construction for this project will be minimal as the caverns already exist and the majority of the facilities are either underground or temporary.

19. Gas Free Seneca asserts that Arlington's non-binding expressions of interest are not enough to establish a need for the facility.[19] Gas Free Seneca also states that Arlington has not shown a need for the project because it did not establish that the natural gas stored in Gallery 2 would be used to meet seasonal peak-day demands. Arlington states that after its open season, it has potential customers for over eleven times the amount of firm storage capacity proposed at the storage facility.[20] While Arlington has no precedent agreements, Arlington contends that the expressions of interest demonstrate a market demand and need for the project. Under the Certificate Policy Statement, we do not require an applicant to submit precedent agreements or service agreements with its certificate application in order to demonstrate the need for a project.[21] Nor do we require a demonstration that gas transported will be used for any specific purpose. Arlington held an open season and received expressions of interest for over eleven times the amount of capacity available at the project. Notwithstanding that no precedent agreements have been signed, the response demonstrates a significant market interest in the availability of additional Northeast market area storage. We find that Arlington has satisfied our requirements for demonstrating a need for the project.

20. Based on the above findings, the Commission concludes that Arlington has demonstrated sufficient need for the project, given it will have no identifiable adverse impacts on existing customers, other pipelines, landowners, or communities. Thus, consistent with the Certificate Policy Statement and section 7(c) of the NGA, the Commission concludes that approval of Arlington's proposal is required by the public convenience and necessity, subject to the conditions discussed below.

---

[16] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *order on clarification*, 90 FERC ¶ 61,128 (2000), *order on clarification*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement).

[17] Arlington's Application at 13.

[18] *Id.* at 3.

[19] Gas Free Seneca's October 15, 2013 Comments.

[20] Arlington's June 3, 2013 Response to Staff's Engineering and Rates Data Request at 8, response (b).

[21] *See, Arlington Storage Co., LLC*, 128 FERC ¶ 61,261 at P 8 (2009) (*Arlington*). Certificate Policy Statement, 88 FERC at 61,747.

NYSDEC OHMS Document No. 201166576-00038

B. *Engineering Issues*

21. Our review of the engineering data submitted by Arlington indicates that Arlington's proposal to convert Gallery 2 from LPG to natural gas storage is technically sound and feasible. Our review further confirms that the Seneca Lake Project, upon completion of the expansion, is properly designed to provide a total of 2.0 Bcf of total working gas capacity, with a withdrawal capacity of 145,000 Dth per day; that the geological and engineering parameters for the proposed underground salt cavern gas storage facilities are well defined; and that the cavern locations are well within the design criteria and confinement of the salt formation.

22. The capacity of the Seneca Lake Project after Arlington's proposed expansion will be as follows:

	Gallery 1	Gallery 2	Seneca Lake
Base Gas capacity, Bcf	0.89	0.20	1.09
Working Gas capacity, Bcf	1.45	0.55	2.0
Total Gas capacity, Bcf	2.34	0.75	3.09
Maximum pressure, psi/ft	0.9	0.9	

23. Arlington proposes to cycle Gallery 2 between 0.9 psi per foot and 0.2 psi per foot, as measured at the casing shoe of the monitoring well, Cavern Well No. 45. Because salt deforms plastically when under a pressure differential, all caverns will shrink over time.[22] The Interstate Oil and Gas Compact Commission's *Hydrocarbon Storage in Mined Caverns Report* (IOGCC Report) states that monitoring to demonstrate cavern stability and successful hydrodynamic containment should be carried out throughout the life of the facility.[23] We have reviewed the sonar survey and mechanical integrity test (MIT) data submitted by Arlington. This information established the size, shape, and volume of Gallery 2 and demonstrated the ability of the cavern to hold pressure. We will require Arlington to conduct annual inventory verification tests, and every five years, sonar surveys or other tests as approved by the Commission, to monitor the caverns' size, shape, and roof to ensure the integrity of the caverns or to detect any lost or migrated gas (Engineering Condition 5). In addition, the engineering conditions set forth in Appendix A of this order will apply to both Gallery 1 and Gallery 2, unless otherwise specified.

24. Gas Free Seneca filed comments on the geology of Arlington's caverns. Comments about the age of the caverns and wells, the Jacoby-Dellwig Fault and a connection between Gallery 1 and Gallery 2; the cavern roof collapse in Cavern Well No. 30 and the integrity of Gallery 2; and the salt pillar thickness will be discussed below. We will discuss the rest of Gas Free Seneca's comments in the environmental discussion.

25. Regarding Gas Free Seneca's comments on the age of Gallery 2 caverns, we are not aware of any instances where cavern age affected the integrity of a cavern or a cavern's ability to hold natural gas. Therefore, we conclude the age of the Gallery 2 caverns is not an integrity issue. However, the age of a well that penetrates a cavern can be an issue. As stated above, Arlington determined that the ages and condition of Cavern Well Nos. 30 and 31 made them unsuitable for use as injection/withdrawal wells in natural gas storage operations. Arlington proposes to permanently plug and abandon Cavern Well Nos. 30 and 31. Arlington drilled two new wells, Cavern Well Nos. 30A and 31A, completing them in accordance with current industry standards. Arlington determined that the size, casing, and wellbore condition of Cavern Well No. 45, despite its age, made it suitable for use in debrining the Gallery and as an observation well for Gallery 2. As part of the engineering requirements in Appendix A, we require Arlington to conduct periodic assessments of all the cavern wells to ensure the cement/casing bonds have not been compromised (Engineering Conditions 4 and 5).

26. Regarding the Jacoby-Dellwig Fault, we acknowledge its presence located east of brine Cavern Well Nos. 29, 37, and 41, which puts it west of Gallery 1 and east of Gallery 2. We also acknowledge that a surface brine flow event occurred while Cavern Well No. 29, located south of the Galleries and not part of either Gallery, was being constructed because its hydraulic fractures apparently intersected the Jacoby-Dellwig fault. However, natural gas has been stored in Gallery 1 with no evidence of leaking, and pressure testing results indicated no pressure loss in either Gallery.[24] Further, neither Gallery intersects with the fault, and any hydraulic fractures created during the construction of the two Galleries would have long since healed due to the salt's inherent plasticity, as explained below. In addition, the structure contour map on the top of the salt gives no indications of faults breaking into the overlying sediments. Therefore, all of the discussions indicate faulting is confined to the salt and the intervening rock layers. Furthermore, the cross-sections (one North-to-South and the other West-to East) illustrate the absence of faulting and the uniformity of the Camillus Shale caprock in the vicinity of Gal-

[22] *See* Thomas, Robert and Gehle, Richard, *A Brief History of Salt Cavern Use*, Solution Mining Research Institute, 2000 ("large volume losses due to salt creep have occurred in natural gas caverns").

[23] *Hydrocarbon Storage in Mined Caverns, A Guide for State Regulators*, Interstate Oil and Gas Compact Commission, 2000.

[24] Arlington's January 2, 2014 Response to Engineering and Data Request at 2.

NYSDEC OHMS Document No. 201166576-00038

lery 2. Finally, the seismic activity in the area around Gallery 2 is low, as discussed below in the environmental section. Based on our analysis of the information in the record, we conclude the presence of the Jacoby-Dellwig fault near the Seneca Lake Project does not compromise the integrity of either Gallery. However, to ensure continued operational integrity, we will require Arlington to monitor both Galleries for any gas loss, and determine how any such gas escaped, and where it has gone (Engineering Condition 7). We will also require Arlington to monitor the surface in and immediately around the Seneca Lake Project facility for any surface expression of gas migration (Engineering Condition 7).

27. We note the comments made by Gas Free Seneca's geologist Dr. Clark[25] regarding the environmental assessment's (EA) omission of the Cavern Well No. 30 roof collapse event discussed in the geologic literature by former U.S. Salt Geologist Dr. Jacoby.[26] Historical roof collapse was the subject of an engineering data request, issued by Commission staff to Arlington on May 15, 2013.[27] Arlington responded to this and other engineering questions on June 3, 2013, stating that, to their knowledge, there have been no roof failures in Galleries 1 or 2, or in any other cavern within the Watkins Glen Brine Field in which natural gas or natural gas liquids have been stored.[28]

28. Dr. Jacoby's literature states that Cavern Well No. 30 experienced the fall of a 400,000 ton block of rock from the roof during the time Gallery 2 was used for LPG storage. The process of cycling LPG, a liquid, involves the displacement of two immiscible[29] liquids. In LPG storage, after cavern development, LPG is injected, displacing the brine. To withdraw the LPG, brine is injected, displacing the LPG. Dr. Jacoby's literature states that unless saturated brine is used continually in recycling product (LPG), there is a distinct possibility of undermining fault blocks, and even when saturated brine is used as a recycling fluid, there would remain some minor quantities of salt that would continue to be dissolved. As described by Dr. Jacoby, this dissolution of salt and the resultant Cavern Well No. 30 roof collapse occurred during the recycling of brine used to store LPG in Gallery 2.[30]

29. As discussed in section A.4.0 of the EA, Arlington proposes to convert Gallery 2 to store natural gas in vapor form, not LPG or other natural gas liquids. In natural gas storage, natural gas is used to completely displace the brine from the cavern. Natural gas is cycled in and out of the cavern through pressure difference. Brine is not reinjected into the cavern as part of the cycling process. Gallery 2 is currently full of brine, as it is no longer in LPG service. Once the Gallery is debrined (dewatered), as described in section A.6.0 of the EA, natural gas will be stored within the caverns. Recycling of brine, either saturated or undersaturated, is not within the scope of Arlington's Gallery 2 Project, and is not consistent with the operations of natural gas storage within Galley 2. Thus, once dewatered further dissolution of the salt in the Gallery will not occur.

30. Gas Free Seneca claims that salt bed caverns found at Gallery 2 provide a less comprehensive seal when compared to salt-dome cavern integrity, and that this must be considered along with the role of geologic faulting in the site area and within the caverns. Cavern integrity is evaluated on an individual basis, taking into account, among other things, all geological information, including the type of formation, *i.e.* bedded salt cavern or salt dome. Based on all the information filed, there is no physical reason to conclude that the bedded salt caverns of Gallery 2 do not have a comprehensive integrity. As discussed in section B.1.3 of the EA, Arlington's evaluation of well logs, isopach maps, and structure maps in the vicinity of Gallery 2 determined that there is no faulting in the Camillus Shale caprock above the proposed storage galleries. Further, as discussed in the environmental section below, the geologic literature states that structure contour and isopach maps reveal that both the upper and lower surfaces of the salt are relatively uniform, that the top and bottom of the salt are horizontal in parallel planes,[31] and the faulting occurred within the salt mass between these over and underlying bedrock units. In addition, the brine pressure test conducted in Gallery 2 showed no loss, indicating the Gallery has integrity. We find no indication that

---

[25] To support its claims, Gas Free Seneca filed with the Commission reports from two geologists, Dr. Richard Young (Dr. Young), Professor Emeritus of Geological Sciences at the State University of New York, and Dr. H.C. Clark (Dr. Clark), retired Professor of Geology and Geophysics at Rice University. These reports provide a detailed discussion of the regional structural geology, and the presence of sub-surface faulting within New York State, and excerpts from several professional publications including those of a former U.S. Salt geologist, Dr. C.H. Jacoby (Dr. Jacoby).

[26] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 (1969b).

[27] FERC's May 15, 2013 Engineering and Rates Data Request.

[28] Arlington's June 3, 2013 Response to Staff's Engineering and Rates Data Request at 4.

[29] Incapable of mixing together.

[30] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 (1969b); and Jacoby, C.H., Szyprowski, S., Paul, D.K., *Earth Science Aspects in the Disposal of Inorganic Wastes, Proceedings of the Fourth Symposium on Salt*, Houston, Texas (1973).

[31] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 at 464 (1969b). Jacoby, C.H. and Dellwig, L.F., *Appalachian Foreland Thrusting in Salina Salt*, Watkins Glen New York, Proceedings of the Fourth Symposium on Salt, Houston, Texas, 227-233 at 231 (1973).

NYSDEC OHMS Document No. 201166576-00038

Arlington's Gallery 2 Project caverns do not have a comprehensive seal and integrity when compared with caverns developed in salt domes.

31. However, as cavern integrity is an issue we are always concerned about, we will require Arlington to conduct a new sonar survey of Gallery 2, through all three cavern wells, to obtain the current size of the gallery, the size and shape of the rubble pile, and the shape of the roof around each well (Engineering Condition 3). Arlington will need to file the results of this survey before dewatering can commence. In addition, we require Arlington to monitor the roof and integrity of the caverns through either periodic sonar surveys or other Commission approved cavern integrity monitoring plan, as stated in Appendix A. This monitoring program will apply to both Gallery 1 and Gallery 2.

32. Generally, the Commission will reference state regulations governing the minimum distance between caverns needed to ensure that operations in one cavern do not impact the integrity of any adjacent cavern. If a state does not have those types of regulations, the Commission uses a minimum distance between caverns of 300 feet, which is the minimum distance used by many states. Arlington states the NYSDEC has not promulgated any regulations prescribing minimum distances or setbacks specific to underground natural gas storage.[32] However, the NYSDEC's established practice is to base permit approval on rock mechanics testing performed on core samples, geologic mapping and the finite-element or finite-difference modeling that is performed to prove or disprove the capacity of the proposed storage cavern to support safe storage of the products over time. Arlington's geologists have determined that the salt pillar distance between storage caverns in this salt formation should be more than 60 feet for adjacent caverns with maximum cavern diameters of no more than 350 feet. The Gallery 2 caverns lie approximately 380 feet west of the Gallery 1 caverns. The next closest cavern, Cavern Well No. 58, is approximately 780 feet to the west of Gallery 2. The closest cavern is more than six times the minimum distance determined with reference to NYDEC practice. Furthermore, the caverns are not near the property lines of U.S. Salt's brine field surrounding Gallery 2. We require Arlington to work proactively with its affiliate, U.S. Salt on future development of the brine field. If U.S. Salt's cavern development program includes any new cavern closer to Arlington's Seneca Lake Project boundaries than Cavern Well No. 58, it is incumbent upon Arlington to ensure no new caverns are developed within 300 feet of either Gallery 1 or Gallery 2.

C. *Market Based Rates*

33. Arlington proposes to offer the additional firm and interruptible storage and hub services that Gallery 2 will support, on an open-access basis at market-based rates under the terms and conditions of its current tariff on file with the Commission.[33] Arlington contends that the additional storage facilities proposed as part of this expansion project will not result in any changes in Arlington's services or require any changes to its tariff. Arlington asserts that there is no need for the Commission to reconsider its prior determination that Arlington lacks market power.

34. Generally, the Commission evaluates requests to charge market-based rates for storage under the analytical framework of its Alternative Rate Policy Statement.[34] Under the Alternative Rate Policy Statement, the Commission evaluates requests for market-based rates pursuant to two principal purposes: (1) to determine whether the applicant can withhold or restrict services and, as a result, increase prices by a significant amount for a significant period of time; and (2) to determine whether the applicant can discriminate unduly in price or terms and conditions of service.[35] To find that an applicant cannot withhold or restrict services, significantly increase prices over an extended period, or discriminate unduly, the Commission must find that there is a lack of market power,[36] because customers have good alternatives,[37] or that the applicant or Commission can mitigate the market power with specified conditions.[38]

35. Arlington requests reaffirmation of its authority to charge market-based rates for its firm and interruptible storage services and its interruptible hub services without filing a new market power study. Arlington also requests any waiver of 18 C.F.R. Part 284 subpart M that the Commission deems necessary for it to grant this request. Arlington asks the Commission to consider the market power study it submitted in 2010 when it

[32] Arlington's June 3, 2013 Response to Staff's Engineering and Rates Data Request at 4.

[33] *Arlington Storage Co., LLC,* Docket No. RP09-872-000 (unpublished delegated letter order issued August 21, 2009).

[34] *Alternatives to Traditional Cost-of-Service Ratemaking for Natural Gas Pipelines and Regulation of Negotiated Transportation Services of Natural Gas Pipelines,* 74 FERC ¶ 61,076, *reh'g and clarification denied,* 75 FERC ¶ 61,024 (1996), *petitions for review denied sub nom., Burlington Resources Oil & Gas Co. v. FERC,* 172 F.3d 918 (D.C. Cir. 1998) (Alternative Rate Policy Statement). *Rate Regulation of Certain Natural Gas Storage Facilities,* Order No. 678, *FERC Statutes and Regulations, Regulations Preambles 2006-2007* ¶ 31,220, *order on clarification and reh'g,* Order No. 678-A, 117 FERC ¶ 61,190 (2006).

[35] *See Blue Sky Gas Storage, LLC,* 129 FERC ¶ 61,210 (2009); *Orbit Gas Storage, Inc.,* 126 FERC ¶ 61,095 (2009).

[36] The Commission defines "market power" as "the ability of a pipeline to profitably maintain prices above competitive levels for a significant period of time." Alternative Rate Policy Statement, 74 FERC at 61,230.

[37] A good alternative is an alternative to the proposed project that is available soon enough, has a price that is low enough, and has a quality high enough to permit customers to substitute the alternative for an applicant's service. *See Id.*

[38] A market power study usually defines the relevant products and geographic markets, measures market shares and concentrations, and evaluates other factors such as replacement capacity, ease of entry, and non-storage alternatives.

NYSDEC OHMS Document No. 201166576-00038

acquired the Seneca Lake Project. Arlington states that the 2010 Market Power Study (2010 study) included an analysis of the Gallery 2 caverns in the aggregate capacity attributed to the Seneca Lake Project.[39]

36. The 2010 study presents a detailed market share and market concentration analysis of the then-current working gas capacity and market concentration for the New York and Pennsylvania storage area. Arlington's 2010 study showed that the market concentration for working gas capacity and maximum daily withdrawal capability in the New York and Pennsylvania area results in Herfindahl-Hirschman Index (HHI) levels of 2,129 and 2,057, respectively, which are above the 1,800 threshold level set forth in the Alternative Rate Policy Statement. However, the 2010 study also showed that the Seneca Lake Project's market shares nevertheless are relatively small: only 0.4 percent for working gas capacity and 1.4 percent for maximum daily withdrawal capability.[40] Arlington's 2010 study showed that the New York and Pennsylvania storage market is concentrated due to the presence of two storage providers, Dominion Transmission Inc. (DTI) and National Fuel Gas Supply Corporation (National Fuel). Both DTI (which has approximately 40 percent of capacity and 40 percent withdrawal capability) and National Fuel (which has 15 percent capacity and 12 percent withdrawal capability) are regulated by the Commission and their Commission-approved rates are cost-based, alleviating the market power potential of relatively small applicants. The Commission has determined that companies with Commission-regulated, cost-based rates cannot exercise market power to increase prices above the cost-based rate cap.[41]

37. Since the approval of Arlington's 2010 study, only one storage company, UGI Storage, has added capacity (14.7 Bcf) in the New York and Pennsylvania market area.[42] This storage facility addition further dilutes the HHI level in Arlington's market area.

38. Therefore, the Commission concludes that the addition of Arlington's expanded aggregate working gas storage capacity of 0.55 Bcf will not allow Arlington to exercise market power in the relevant market. Furthermore, Arlington's request for reaffirmation of its authorization to charge market-based rates is unopposed. For these reasons, Arlington's request for reaffirmation of its market-based rate authority is approved.

39. However, as in the 2010 Order, approval of market-based rates for the indicated services is subject to re-examination in the event that: (a) Arlington adds storage capacity to the project beyond the capacity authorized in this order; (b) an affiliate increases storage capacity; (c) an affiliate links storage facilities to the project; or (d) Arlington, or an affiliate, acquires an interest in, or is acquired by, an interstate pipeline connected to the project. Since these circumstances could affect its market power status, Arlington must notify the Commission within 10 days of acquiring knowledge of any such changes. The notification must include a detailed description of the new facilities and their relationship to Arlington and the project.[43] The Commission also reserves the right to require an updated market power analysis at any time.

40. Arlington is not proposing any changes to its existing tariff. Arlington proposes to offer firm and interruptible storage and hub services utilizing Gallery 2 on an open-access basis at market-based rates under the terms and conditions of its existing tariff. The Commission finds that the additional storage facilities proposed by Arlington in this application will not result in any changes in Arlington's services or require any changes to Arlington's FERC NGA Gas Tariff.

D. *Request for Waivers of Filing, Reporting and Accounting Requirements*

41. Arlington requests that the Commission waive the following sections of the Commission's regulations: (1) section 157.6(b)(8) (applicants to submit cost and revenue data); (2) sections 157.14(a)(13), (14), (16), and (17) (cost-based exhibits); (3) section 157.14(a)(10) (gas supply data); (4) the accounting and reporting requirements of Part 201 and sections 260.1 and 260.2 (Form Nos. 2 and 2A); (5) section 284.7(e) (reservation charge); and (6) section 284.10 (straight fixed-variable rate design methodology).

42. In light of the prior approval of market-based rates for Arlington's storage service and the current request for continuation of authority to provide service at market-based rates, the cost-related information required by the above-described regulations is not relevant. Consistent with previous Commission orders,[44] Arlington's request for waiver of the regulations requiring the filing of cost-based rate related information is granted, except that such waivers do not extend to

---

[39] Arlington's Application at 21.

[40] The 2010 study showed that the market shares of Arlington's total storage field (Thomas Corners Project, Adrian Field Storage Project, and Seneca Lake Project), along with the Stagecoach Project, now owned by Crestwood Equity Partners LP, were relatively small, only 7.9 percent for working gas capacity and 8.0 percent for maximum daily withdrawal capability.

[41] *Central New York*, 94 FERC ¶ 61,194, at 61,706-07 (2001).

[42] *UGI Storage Co.*, 133 FERC ¶ 61,073 (2010), *order on reh'g*, 134 FERC ¶ 61,239 (2011).

[43] *See, e.g., Port Barre Investments*, 116 FERC ¶ 61,052 (2006); *Copiah County Storage Co.*, 99 FERC ¶ 61,316 (2002); *Egan Hub Partners, L.P.*, 99 FERC ¶ 61,269 (2002).

[44] *See, e.g., Tricor Ten Section Hub*, LLC, 136 FERC ¶ 61,242 at P 40 -41 (2011); *Black Bayou Storage, LLC*, 123 FERC ¶ 61,277 at P 35 (2008); *Port Barre Investments, L.L.C. d/b/a Bobcat Gas Storage*, 116 FERC ¶ 61,052 at P 33 (2006).

NYSDEC OHMS Document No. 201166576-00038

the Annual Charge Assessment.[45] Arlington must file page 520 of Form No. 2 or 2-A, reporting gas volume information, in order to permit the Commission to accurately calculate the annual charge.[46] Arlington concurs in its application that it will file page 520 of Form 2 or 2-A.[47] In addition, Arlington must maintain records of cost and revenue data consistent with the Commission's Uniform System of Accounts and stand ready to present these records if requested.

E. *Environmental Review*

43. On April 3, 2013, the Commission issued a Notice of Intent to Prepare an Environmental Assessment for the Proposed Gallery 2 Expansion Project (Gallery 2 Project) and Request for Comments on Environmental Issues (NOI). The NOI was mailed to interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American tribes; local libraries and newspapers; and affected property owners, as defined in the Commission's regulations (*i.e.*, landowners within one-half mile of the proposed compressor unit).

44. We received over 400 written comments in response to our NOI and Arlington's application.[48] The commenters included individuals, the Schuyler County Environmental Management Council, the U.S. Environmental Protection Agency (EPA), and Gas Free Seneca.[49] The primary issues raised during scoping concerned air quality, increased vehicle traffic, migratory birds, groundwater and surface water, public health and safety, visual impact, cumulative impacts, alternatives to the Gallery 2 Project, preparation of an environmental impact statement (EIS) rather than an EA, and an extension of time for filing comments and interventions on the Gallery 2 Project.

45. To satisfy the requirements of the National Environmental Policy Act of 1969 (NEPA), our staff prepared an EA for Arlington's proposal. The EA was prepared with the cooperation of the New York State Department of Environmental Conservation (NYSDEC). The analysis in the EA addresses geology, soils, water resources, wetlands, vegetation, fisheries, wildlife, threatened and endangered species, land use, recreation, visual resources, cultural resources, air quality, noise, safety, cumulative impacts, and alternatives. The EA also addresses all substantive comments received during the scoping process, as well as environmental issues raised by intervenors.

46. On September 13, 2013, the EA was issued for a 30-day comment period and placed into the public record. The EA was also mailed to all interested parties including federal, state, and local officials; agency representatives; environmental and public interest groups; Native American tribes; local newspapers; and affected property owners. The Commission received 41 comment letters on the EA from members of the public, EPA, Schuyler County Environmental Management Council, Gas Free Seneca, Earthjustice (including a compilation of letters that it filed for others), and New York State Senator Tony Avella.

47. An extension of the EA comment period was requested by EPA and Gas Free Seneca due to the federal government shutdown that occurred between October 1 and 16, 2013. To allow affected federal agencies the opportunity to comment, the Commission issued a notice reopening and extending the comment period to November 1, 2013.

48. On October 8, 2013, Gas Free Seneca requested an additional comment period extension to review and comment on geologic materials that were filed by Arlington as critical energy infrastructure information (CEII). The Commission required Arlington to provide these documents to Gas Free Seneca in an October 8, 2013 order. No additional extension of time was necessary; Gas Free Seneca filed its comments on the geologic materials on January 15, 2014, and those comments are addressed in this order.

49. The majority of comments on the EA address: (1) air quality, including compliance with National Ambient Air Quality Standards (NAAQS), air quality modeling requirements, climate change, and potential impacts on nearby vegetative communities and vineyards; (2) cumulative impacts on air quality, noise, public health, tourism due to increased truck and rail traffic, and safety related to the combined operation of the Gallery 2 Project and the proposed Finger Lakes Project; (3) geologic hazards associated with the proposed development of Gallery 2; (4) water resource impacts associated with brine water disposal and stormwater; (5) vegetation and wildlife impacts associated with invasive species and migratory birds; and (6) alternatives, including the no-action alternative and other storage alternatives in the region.

50. The EPA's comments primarily concern the adequacy of Arlington's air quality modeling. In addition, the EPA recommends that the applicant only use evergreen trees native to the area in its planned screening of the project's compressor from Seneca Lake. Arlington has agreed to plant a screen of evergreen trees between the project's compressor and Seneca Lake in order to mitigate the impact on the existing viewshed. Schuyler County Environmental Management Council comments on the fate of the brine water removed during cavern debrining, the need for stormwater mitigation, and compressor noise mitigation. Gas

[45] *See BGS Kimball Gas Storage, LLC*, 117 FERC ¶ 61,122 at P 49 (2006).

[46] *Unocal Windy Hill Gas Storage, LLC*, 115 FERC ¶ 61,218 at P 38 (2006).

[47] Arlington's Application at 22.

[48] As noted above, many of these comments actually addressed the adjacent, non-jurisdictional Finger Lakes LPG storage project.

[49] Represented by Earthjustice.

NYSDEC OHMS Document No. 201166576-00038

Free Seneca comments that the EA fails to consider the full extent of geologic risks, and contains flaws in its analysis of groundwater, surface water, vegetation, and noise impacts. Gas Free Seneca also states that the EA is deficient in its treatment of invasive species, cumulative impacts, and alternatives, and that a full EIS should be prepared for the Gallery 2 Project. Senator Avella comments in support of Gas Free Seneca and also requests that a full EIS be conducted along with a health impact study, or alternatively, that the application be denied.

51. Comments on the EA are addressed below, organized by general topic.

1. *Air Quality*

52. EPA and Gas Free Seneca comment that Arlington used an outdated model, SCREEN3, for its air quality assessment. The EPA states that although the results were below the NAAQS, the 1-hour nitrogen dioxide (NO_2) impact is close to the standard, and recommends that AERSCREEN or AERMOD be used instead of SCREEN3 for air quality assessments.

53. In order to address the potential exceedance of the 1-hour NO_2 NAAQS standard, our staff requested that Arlington perform a refined air quality modeling analysis using the latest version of EPA's AERMOD air dispersion modeling program. In response, Arlington supplemented its application on January 15, 2014, to now propose a 400 hp electric motor-driven compressor unit in place of the 500 hp gas-fired unit analyzed in the EA. There will be no emissions associated with the electric motor-driven compressor unit; therefore, further air quality modeling was rendered unnecessary by Arlington's new proposal. Electric service for the newly proposed unit is available near the Gallery 2 site, requiring only the replacement of one or two wooden utility poles along an existing access road within the Seneca Lake Project's facility. We find the required electric service will require minimal additional environmental impact at previously disturbed locations.

54. New York State Senator Avella requests that the Commission perform a health impact study. Based on the analysis in the EA and the elimination of any operational emissions associated with the proposal, we do not believe a health impact study is warranted.

55. The EPA comments that Arlington's June 25, 2013 response incorrectly stated that New York State does not have a lead standard. Although this facility may not be subject to a lead standard, we acknowledge that New York does regulate lead for applicable sources.

56. The EPA states that the locations of the monitoring sites establishing criteria air pollutant background concentrations provided in Arlington's June 25, 2013 response are distant from the Gallery 2 Project site, and the EPA recommends that the EA should discuss the "representativeness" of this background relative to the project site. Arlington obtained background concentrations from monitoring stations in: Steuben County, New York; Montoursville, Lycoming County, Pennsylvania; and Scranton, Lackawanna County, Pennsylvania. Arlington selected these locations on the basis of being the closest available monitoring sites.

57. We note that the latest U.S. Census finds that Steuben County, New York, and Lackawanna and Lycoming Counties, Pennsylvania, as well as the relatively urbanized areas of Scranton and Montoursville (bordering Williamsport), each have population densities considerably greater than that of Schuyler County.[50] Therefore, the data included in the EA and obtained from the nearest available monitoring sites are conservative estimates of criteria pollutant background concentrations found within Schuyler County and the Gallery 2 Project area.

58. The EPA comments that Arlington's June 25, 2013 response erroneously exempts the emergency engine at Arlington's existing compressor station from carbon monoxide (CO) modeling for purposes of demonstrating compliance with the 1-hour CO NAAQS standard. We note this omission. We also note that adding the emergency generator's contribution to modeled CO concentrations would, at most, minimally increase the predicted maximum concentrations from Arlington's compressor station, which would remain well below the 1-hour CO NAAQS standard.

59. Numerous commenters state that ozone generated from the Gallery 2 Project would adversely affect grapevines in the project area. Our staff reviewed the information from the U.S. Department of Agriculture concerning the effects of ozone on plants. Section B.7.1 of the EA concludes that the emission of ozone precursors from the Gallery 2 Project's originally proposed natural gas-fired compressor would have only minimally added to the existing ambient concentrations of these pollutants and would not have resulted in any appreciable change in the formation of ground-level ozone in the project area or damage to surrounding vegetative communities. However, there will be no ozone emissions associated with the now-proposed electric motor-driven compressor unit, and the project operation will contribute no emissions of greenhouse gases resulting in climate change impacts.

2. *Cumulative Impacts*

60. Gas Free Seneca, the Schuyler County Environmental Management Council, and many other commenters in support of Gas Free Seneca, claim that the EA is deficient in its treatment of cumulative impacts. Gas Free Seneca specifically states that the EA does not properly consider the

[50] http://quickfacts.census.gov.html

NYSDEC OHMS Document No. 201166576-00038

cumulative operational impacts of the Gallery 2 Project, the existing natural gas facility, the AmeriGas facility, and the Finger Lakes Project.

61. Of the identified projects that could contribute to cumulative environmental impacts, only the Finger Lakes Project has potential for cumulative impact in the Gallery 2 Project area. The proposed Gallery 2 Project, along with the Finger Lakes Project, was analyzed in the EA for potential cumulative impacts on groundwater, surface water resources, and air quality. The NYSDEC is the lead regulatory agency for the Finger Lakes Project and is currently reviewing the project application under the New York State Oil, Gas, and Solution Mining Law and the State Environmental Quality Review (SEQR) Act. No other projects identified within the 5-mile-radius of Arlington's Gallery 2 Project (U.S. Salt, Cargill Salt Co., and AmeriGas) would involve salt cavern storage of natural gas and none would have a direct or indirect cumulative impact on groundwater, surface water resources, or air quality.

62. Gas Free Seneca also comments that the EA ignores cumulative impacts on aesthetics, noise and community character focusing solely on groundwater, surface water and air quality.[51] However, due to the limited scope and impacts of the Gallery 2 Project, groundwater, surface-water quality, and cumulative air impacts were the only resources identified in the EA that could potentially be cumulatively affected (*i.e.*, there will be no impacts on, for example, fisheries, wildlife, or threatened and endangered species).

63. The EA concludes that there would be negligible cumulative impacts on groundwater and surface water. Further, the EA states that construction of the Finger Lakes Project would occur under the authority of the NYSDEC and would be mitigated to avoid significant impacts on groundwater and surface waters. Because no project-specific evidence has been provided to sufficiently call into question the adequacy of the EA's cumulative impact analysis, we concur that construction and operation of Arlington's Gallery 2 Project and the Finger Lakes Project will not have cumulative impacts on groundwater and surface waters.

64. Gas Free Seneca comments that the proposed plugging [*i.e.* abandoning and sealing] of Cavern Well Nos. 30 and 31 would require around the clock activity and Arlington should not be permitted to engage in around the clock construction activities. Gas Free Seneca also states that the Gallery 2 Project would result in increased truck and rail traffic that would cumulatively impact tourism.

65. As stated in the EA, construction would occur on Arlington's property during a one-month construction window. The construction equipment would operate on an as-needed basis and, contrary to Gas Free Seneca's suggestion, limited to daytime hours only. The Gallery 2 Project's construction will require the temporary use of vehicles, machines, and other equipment and will increase existing truck traffic in the project's vicinity. Following project construction, truck traffic will return to existing levels. There is no increased rail traffic associated with construction or operation of the Gallery 2 Project facilities. Operation of the Gallery 2 Project will not increase truck or rail traffic over existing levels, including the transport of any hazardous materials. As concluded in the EA in section B.5.0, construction and operation of the Gallery 2 Project would have no significant impact on land use, aesthetics, or impact the local economy (primarily derived from tourism).

66. The EA's cumulative air quality analysis concludes that the construction schedule for the Gallery 2 Project and the Finger Lakes Project is not expected to overlap, and as such, no cumulative impacts on air quality during construction would occur. Gas Free Seneca states that the EA should address cumulative operational impacts for these projects, as well as from the 60,000-gallon AmeriGas aboveground LPG storage facility located in Watkins Glen, New York.

67. Per information obtained from the NYSDEC Draft Supplemental EIS for the Finger Lakes Project facility, electric motor-driven pumps would be utilized at the brine withdrawal and injection locations, and six additional 40 hp compressor units using unspecified sources of power would be operated in association with railcar unloading operations. The operation of electric motor-driven units would not result in air contaminant emissions at their respective locations; however, the 40 hp compressor units would be sources of air contaminants if operated on fossil fuel (*e.g.*, natural gas, LPG, diesel). Additional air pollutants associated with the Finger Lakes Project would include fugitive dust emissions associated with truck and rail transport activities (including criteria pollutant particulate matter), as well as exhaust from the truck and railroad engines. The air pollutant emissions from these activities would be intermittent, and in the case of the 40 hp units, would be minor sources of emissions that would disperse rapidly into the existing background concentrations.

68. Subsequent to issuance of the EA, Arlington now proposes to construct an electric motor-driven unit for the Gallery 2 compressor, in place of the gas-driven unit. An electric motor-driven compressor is not a direct source of air emissions; therefore, its operation will not result in cumulative impacts on air quality within the Gallery 2 Project's region of influence.

69. We agree with the EA's conclusion that the Gallery 2 Project and the Finger Lakes Project will not result in significant cumulative impacts on regional air quality.

70. Several comments state concern that the Gallery 2 Project-related noise would impact public health and, thus, result in cumulative noise

[51] Gas Free Seneca's October 15, 2013 Comments at 9.

NYSDEC OHMS Document No. 201166576-00038

impacts. Gas Free Seneca comments that the EA does not assess the possibility of noise traveling across Seneca Lake. Similarly, the Schuyler County Environmental Management Council states the potential for sound to become "magnified" across Seneca Lake. On February 12, 2014, Arlington filed the results of a noise assessment for the electric motor-driven unit in response to staff's February 3, 2014 data request. The noise assessment concludes that the Gallery 2 Project would not result in an audibly detectable increase over existing ambient noise levels at the nearest noise sensitive area (NSA), and the combined full-load operation of the Gallery 2 Project and the existing Arlington compressor station would remain below a day-night sound level of 55 decibels on the A-weighted scale.

71. Therefore, noise from the Gallery 2 Project's operation will contribute minimally to any cumulative noise impacts at the nearest NSAs, which would include the noise contribution from existing ambient noise sources and the proposed Finger Lakes Project. We acknowledge that some other areas, such as any noise receptors across Seneca Lake, could experience some increase in ambient noise levels from the Gallery 2 Project's operation. However, due to other competing noise sources, including the existing Arlington compressor station and highway and railroad traffic, noise from the Gallery 2 Project would not significantly impact residents or other individuals within the project area.

72. Arlington's acoustic study also estimates that the combined operation of the existing Arlington compressor station and Gallery 2 Project facilities will not result in a perceptible increase in vibration at nearby NSAs. Environmental Condition 12 in the appendix to this order requires Arlington to file the results of a noise survey demonstrating that noise attributable to the operation of the Gallery 2 Project compressor unit will not exceed a day-night noise level of 55 decibels on the A-weighted scale at any nearby NSAs.

73. Further, due to the Gallery 2 Project's lack of operational air emissions and the minor noise and vibration emissions, the project operation will not result in cumulative increased risks to public health.

74. Gas Free Seneca also comments that the EA does not analyze the impacts of Arlington's future expansion plans to develop additional natural gas storage using existing U.S. Salt caverns, and cites Inergy Midstream's (currently Crestwood Midstream) most recent Annual Report filed with the Securities and Exchange Commission, and its most recent quarterly filings as proof of these future plans. Gas Free Seneca comments that not addressing these expansion plans constitutes segmentation of a much larger project, contrary to the purpose of NEPA, and that the Commission should evaluate a "range of build out scenarios" extrapolated from Inergy Midstream's statements to its shareholders.[52]

75. Improper segmentation of a project occurs when interrelated projects are artificially divided into smaller, less significant components in order to avoid the NEPA requirement that an EIS be prepared for all major federal actions with significant environmental impacts.[53] The Council of Environmental Quality's (CEQ) NEPA regulations provide guidance on when actions should be analyzed together or separately. Specifically, CEQ's regulations provide that proposals should be analyzed in the same EIS if they are "connected" (*i.e.*, "closely related").[54] Actions are connected if they automatically trigger other actions that may require an EIS, cannot or will not proceed unless other actions are taken previously or simultaneously, or are interdependent of a larger action and depend on the larger action for their justification.[55]

76. As explained in this order, the purpose of the Gallery 2 Project is to convert two existing salt caverns, previously used to store LPG, to natural gas storage. The Gallery 2 Project will add 0.55 billion cubic feet of working gas capacity and 0.2 billion cubic feet of base gas capacity within an existing storage facility which will be available to meet seasonal peak-day demands and help respond to market fluctuations. Inergy Midstream's speculation that the market will require additional natural gas storage capacity utilizing solution-mined cavities at some time in the future is not a proposed project before the Commission and does not constitute a connected action. Therefore, we conclude there is no improper segmentation under NEPA.

3. *Geologic Hazards*

77. As described in the EA, Arlington's storage field makes use of existing salt caverns originally developed by U.S. Salt within the Salina Salt Group, which consists of six distinct salt beds and five intervening sedimentary bedrock units of shale, siltstone and anhydrite. Production of commercial salt products is an ongoing operation by U.S. Salt within the Salina Salt Group. The closest caverns to the Gallery 2 Project caverns are Cavern Well No. 58 to the west and the Gallery 1 caverns to the east. The Gallery 2 caverns (Cavern Well Nos. 30, 31, and 45) were previously utilized between 1964 and 1989 for LPG storage. Currently Arlington stores natural gas within its Gallery 1 caverns (Cavern Well Nos. 28 and 27/46) located slightly east of the proposed facilities. Gas Free Seneca comments that the EA's analysis of geologic risks associated with Gallery 2 is too limited in its discussion of significant seismic activity, landslides, or other geologic hazards; and does

[52] Gas Free Seneca's October 15, 2013 Comments at 8.

[53] *See Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294,298 (1987).

[54] 40 C.F.R. § 1508.25(a)(1)(iii) (2013).

[55] *Id.* § 1508.25(a)(1).

NYSDEC OHMS Document No. 201166576-00038

not take into account the significance of geologic structure and the presence of sub-surface faulting.

78. To support its claims, Gas Free Seneca filed with the Commission reports from two geologists, Dr. Young and Dr. Clark. These reports provide a detailed discussion of the regional structural geology, and the presence of sub-surface faulting within New York State, and excerpts from several professional publications including those of a former U.S. Salt geologist, Dr. Jacoby. Dr. Clark provides a considerable discussion (including cavern completion and abandonment reports) regarding the problems associated with the development of U.S. Salt Cavern Well No. 58, and the relationship of these development problems with a coincidental seismic event in the region. Dr. Clark further discusses a release/flow of cavern brine fluid detected during a hydraulic fracturing program on U.S. Salt Cavern Well No. 29 to a point 0.5 mile from the well location. Both Dr. Young and Dr. Clark, as well as numerous other commenters, refer to a recent (September 10, 2013) low magnitude (M2.0) seismic event located about 13 miles north of the Gallery 2 Project, as evidence of the unpredictable seismicity in the region.

79. Dr. Clark points to a number of alleged deficiencies in the EA including: 1) the EA is brief and generally dismisses commenter concerns about geology, seismicity, and faulting; 2) the Commission should have recognized every element of the geologic repository (published geologic papers and articles) particular to the Gallery 2 Project caverns; 3) the EA should have expanded on comments raised about seismicity in the area; and 4) the EA gives faulting in the Gallery 2 area "short shrift," and responds only to commenter concerns about the possibility of a large strike-slip fault (the Jacoby-Dellwig Fault) passing through one of the caverns.

80. Section B.1.3 of the EA characterizes the Gallery 2 Project area as having a low potential for seismicity, with peak ground acceleration of between 2 to 3 percent gravity. The east coast of the United States is a passive tectonic plate boundary located on the "trailing edge" of the North American continental plate, which is relatively seismically quiet. However, cycles of Appalachian mountain-building events did exist in the Gallery 2 Project area during the late Paleozoic to Mesozoic-Era, which produced compressional pressure on sediments in the basin. Earthquakes do occur in the area of Arlington's Galley 2 Project, and within the Allegheny Plateau Physiographic Province. These events are cited in the geologic literature, and are documented by the U.S. Geological Survey (USGS). Present-day seismic activity in the region is largely due to trailing edge tectonics and residual compressional stress release from these historical geologic mountain building events.

81. The low-seismic risk discussed in section B.1.3 of the EA is supported by the published literature[56] cited by Gas Free Seneca's experts, and is further supported by the low intensity of the recent (September 10, 2013) M2.0 earthquake. Magnitude 2 earthquakes are characterized as weak events with no potential for damage and little to no perceived ground shaking.

82. The Cavern Well No. 58 development problems, discussed by Dr. Clark, and its association to a coincidental seismic event was the opinion of one of U.S. Salt's consulting engineers (Mr. Larry Sevenker). Mr. Sevenker's incorrect interpretation of the Cavern Well No. 58 sonar log lead to a false conclusion that the cavern's roof had collapsed due to seismicity in the region.[57] The seismic event cited in Dr. Clark's comments has never been validated and subsequent reentry into Cavern Well No. 58 and sonar logging in 2009 by U.S. Salt showed that the cavern was intact, and what was originally interpreted as a roof collapse was not.[58]

83. Gas Free Seneca states that the EA's conclusions that the caverns are structurally sound relies heavily on the fact that Gallery 2 was used for years to store LPG. Gas Free Seneca states that increasing storage pressure in the caverns during debrining (dewatering), testing, and/or operation could expand and re-open an existing, unmapped assemblage of fractures. Gas Free Seneca further states that these re-opened fractures could provide preferential pathways for natural gas and/or concentrated brine water to escape and contaminate shallow, potable groundwater or make its way into Seneca Lake, thereby affecting the natural salinity of the lake rendering this potable source of drinking water unusable.

84. Dr. Clark states that the EA is brief and general in the conclusions drawn regarding geologic faults within the region, reported by U.S. Salt's geologist (Dr. Jacoby) in a number of publically available professional papers.[59] Dr. Clark states that the EA should have expanded on citizen comments raising these issues, recognizing that seismicity is a legitimate concern in the Watkins Glen Brine Field and the overall regional tectonic framework and events related to the caverns reveal the stress environment within the subsurface.

85. Dr. Clark cites the geologic literature with information showing that "both" [Gallery 2]

[56] Jacobi, R.D., *Basement Faults and Seismicity in the Appalachian Basin of New York State* (2002). Geology Department, University of Buffalo, *The State of New York*; and Podwysocki, M.H., Pohn, H.A., Phillips, J. Krohn, D., Purdy, T. and Merin S. (1982). *Evaluation of Remote Sensing, Geological and Geophysical Data for South - Central New York and Northeastern Pennsylvania*. USGS Open File Report 82-319.

[57] Larry Sevenker's January 15, 2013 Letter to NYSDEC.

[58] January 24, 2014. Communication between A.J. Rana (FERC Environmental Staff Geologist) and Mr. Peter Briggs (NYSDEC, Director, Bureau of Oil & Gas Permitting and Management). See also, Arlington's June 3, 2013 Response to Staff's Engineering and Rates Data Request.

[59] The Charles Jacoby articles.

NYSDEC OHMS Document No. 201166576-00038

caverns are cut by a bedding plane, low-angle thrust fault that enabled the hydraulic fracturing connection between Cavern Wells Nos. 30 and 31, and that this thrust faulting created the underlying cause for a cavern roof collapse in Cavern Well No. 30, when a 400,000 ton mass of bedrock fell from the roof of the cavern to the floor during cavern use for LPG storage.[60] Further, Dr. Clark points out that the geologic literature describes a major strike-slip fault, the Jacoby-Dellwig Fault, cutting through geologic section [evaporites] with about 1,200 feet of horizontal displacement along the fault trend in a north direction between Gallery 2 (Cavern Well No. 31), and Gallery 1 (Cavern Well No. 28).

86. As discussed in section B.1.3 of the EA, Arlington's evaluation of well logs, isopach maps, and structure maps in the vicinity of Gallery 2 determined that there is no faulting in the Camillus Shale caprock above the proposed storage galleries. In addition, section B.1.3 of the EA states that the strike-slip fault, in which many commenters expressed their concerns that it is located beneath the Gallery 2 Project caverns, is in fact east of Gallery 2 [between Gallery 1 and Gallery 2].

87. We note the additional published literature cited by Dr. Clark's January 2014 comments which state that tear faults (small scale local strike slip faults) and thrust faults developed in the Salina Salts and the intervening rock strata between individual salt layers. However, the geologic literature cited by Dr. Clark also describes that structure contour mapping on top of the Salina Salt gives no indication of the faults breaking up the overlying bedrock. The geologic literature states that structure contour and isopach maps reveal that both the upper and lower surfaces of the salt are relatively uniform and that the top and bottom of the salt are horizontal in parallel planes.[61] In addition, the literature states that the evaporites located in the center of the sediments became viscoplastic, absorbed most shock associated with the thrusting action during the paleo-mountain building events, and at the same time acted as a lubricant in between two rigid blocks of carbonate bedrock below and above the Salina Salt.[62] The geologic literature further describes the contact between the bottom salt and the underlying bedrock as sharp and smooth, forming a plane along which the entire salt series was thrust toward the north-northwest.[63]

88. Dr. Clark's comments that the Salina Salt mass underwent considerable deformation producing low-angle thrust faults and tear faults through the salt and intervening clastic units, and that these faults have been exploited for cavern development and connection through hydraulic fracturing. However, the bedrock units above and below the Salina Salt sequence remains unaffected by the paleo-faulting events, as demonstrated through isopach mapping of the Camillus Shale caprock above the proposed storage galleries, and as noted in Dr. Jacoby's papers cited above.

89. Further, Dr. Jacoby states that failure to maintain sufficient pressure [during hydraulic fracturing] results in the "healing" or closing in of the fractures, and that halite crystallizes in the fractures if sufficient pressure is not maintained until the void is completely filled. Dr. Jacoby describes this crystalline halite material as "substantially stronger" in tension than the original salt, thus resisting refracturing, and that this healing effect allows fractured cavities in faulted salt beds, such as those of New York, to be used for the storage of hydrocarbons.[64]

90. Section B.1.3 of the EA states that pressure changes in the Gallery 2 caverns would occur gradually and that no shock or hammer effect would result in sudden changes in the cavern pressure. Gas Free Seneca claims that hydraulic fracturing pressures could re-open an existing assemblage of unmapped fractures; however, this ["hydraulic fracturing"] is not proposed for Arlington's Gallery 2 Project cavern debrining and/or operational activities.

91. During Arlington's cavern testing, pressure was applied at the well head and held for an extended period of time while the caverns and wells offset from the caverns were monitored for pressure changes. It was common practice by U.S. Salt to horizontally connect the caverns by hydraulic fracturing. However, as stated above, this is not proposed by Arlington. Dr. Jacoby states that the initial pressure required at the well head to split the salt bed is 1.05 times the vertical distance to the point at which pressure is applied and describes an initial pressure of 2,835 pounds per square inch (psi) necessary to fracture the salt at Cavern Well No. 28 (Gallery 1).[65]

92. Hydraulic fracturing initiation pressures used by U.S. Salt on wells in the Arlington storage field have been in the range of 1.36 psi/foot (ft) to 1.70 psi/ft (2,500 psi to 3,500 psi at the well head)

---

[60] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 (1969b). Jacoby, C.H. and Dellwig, L.F., *Appalachian Foreland Thrusting in Salina Salt*, Watkins Glen New York, Proceedings of the Fourth Symposium on Salt, Houston, Texas, 227-233 (1973).

[61] *Id.*

[62] Jacoby, C.H., Szyprowski, S., Paul, D.K., *Earth Science Aspects in the Disposal of Inorganic Wastes, Proceedings of the Fourth Symposium on Salt*, Houston, Texas (1973).

[63] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 (1969b).

[64] *Id.*

[65] Jacoby, C.H., *International Salt Brine at Watkins Glen, New York, Proceedings of the First Symposium on Salt*, Cleveland, Ohio, 506-520, at 508 (1962).

NYSDEC OHMS Document No. 201166576-00038

to produce the required fracturing and cavern connection results.[66] These pressures are much greater than the pressures Arlington would operate the Gallery 2 caverns, which range between 0.2 psi/ft and 0.9 psi/ft (which equates to 400 psi and 1,669 psi at the well head). Further, as discussed above, existing fractures within the Salina Salt that were previously hydraulically fractured during cavern development heal naturally and are substantially stronger in tension than the original salt.[67] The release of brine fluid from Cavern Well No. 29 was, as Dr. Clark states and what is cited in the geologic literature[68] the result of preferential fracture flow during the hydraulic fracturing in this cavern.

93. Given the proposed operational pressures, it is unlikely that fluid (brine) migration from the Gallery 2 caverns will contaminate potable groundwater sources or Seneca Lake.

94. In consideration of our review of the geologic information provided by Gas Free Seneca's expert geologists, we restate the EA's conclusion that there will be no significant impact on environmental resources due to geologic hazards or from the geologic framework present in the Gallery 2 Project area.

4. *Water Resources*

95. The Schuyler County Environmental Management Council questions the fate of the brine produced during debrining of the Gallery 2 caverns, if the brine is rendered inert and environmentally safe, and if it is ultimately pumped down an abandoned salt well. The Council requested additional information regarding any increase or alteration to impervious cover, how this would impact stormwater drainage issues, how potential brine leaks and/or spills would be addressed, and the need for a stormwater mitigation plan.

96. Section B.3.5 of the EA states that U.S. Salt would temporarily store brine from the Gallery 2 caverns in its existing brine ponds and would utilize the salt in these ponds for salt product processing. In addition, as stated in section B.3.5 of the EA, U.S. Salt is required by NYSDEC to maintain the brine ponds in a leak-free condition in conjunction with its Class III underground injection control permit, and monitor the brine field with groundwater monitoring wells.

97. During the brine evaporation process, there are inorganic precipitates and insoluble material which originate in the caverns and remain behind in the evaporation process. It is common practice to return the inorganic precipitates/insoluble material to designated caverns within the brine field, in accordance with NYSDEC approval, instead of sending this material to a landfill. Currently, there are no active brine disposal wells within Schuyler County.[69] Historically, U.S. Salt did operate a brine disposal well at its Watkins Glen Plant which is the subject of Dr. Jacoby's paper cited by Dr. Clark;[70] however, the disposal well, cavity well, and groundwater monitoring wells discussed in Dr. Jacoby's paper have all been abandoned.[71]

98. Section A.7.0 of the EA states that construction of the Gallery 2 Project would disturb a total of 6.60 acres of land owned by Arlington, and following construction Arlington would maintain 0.85 acre for permanent operation of the Gallery 2 Project facilities (wells, compressor pad, brine pump pad, valves, and controls for the interconnecting pipeline). The remaining 5.75 acres disturbed by pipeline construction, temporary access road use, and laydown area would be restored to former uses (predominantly maintained lawn and gravel cover).

99. A portion of the 0.85 acre would consist of new impervious surfaces. The largest impervious surface would be associated with the 400 hp electric motor-driven compressor that would be housed within a steel building with a surface footprint measuring 1,280 square feet (32 foot by 40 foot), or 0.03 acre of impervious cover. There are two man-made waterbodies within the Gallery 2 Project area that convey surface-water drainage. Both waterbodies flow into an unnamed tributary to Seneca Lake. As described in section A.6.0 of the EA, Arlington would implement the measures in FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* (FERC's Plan) to minimize impacts from erosion and ensure restoration of the Gallery 2 Project area. The minimal increase in impervious surface will be a minor increase over existing conditions in the project area. In regard to brine leaks and spills, section B.3.5 of the EA states that Arlington would implement its Spill Prevention, Containment, and Countermeasure Plan for the containment, handling and mitigation of surface spills of fuels, solvents, or lubricants during construction. The measures included in the spill plan will adequately protect groundwater and surface water resources at the Gallery 2 Project area.

---

[66] December 6, 2013. Communication between A.J. Rana (FERC Environmental Staff Geologist) and Mr. Peter Briggs (NYSDEC, Director, Bureau of Oil & Gas Permitting and Management).

[67] Jacoby, C.H., *Storage of Hydrocarbons in Bedded Salt Deposits Formed by Hydraulic Fracturing*, Proceedings of the Third Symposium on Salt, Cleveland, Ohio, 463-469 (1969b).

[68] Jacoby, C.H. and Dellwig, L.F., *Appalachian Foreland Thrusting in Salina Salt*, Watkins Glen New York, Proceedings of the Fourth Symposium on Salt, Houston, Texas, 227-233 (1973).

[69] NYSDEC Brine Disposal Well Summary. Accessed on February 26, 2014 at http://www.dec.ny.gov/energy/29856.html.

[70] Jacoby, C.H., Szyprowski, S., Paul, D.K., Earth *Science Aspects in the Disposal of Inorganic Wastes, Proceedings of the Fourth Symposium on Salt*, Houston, Texas (1973).

[71] NYSDEC Well Data Search. Accessed on February 26, 2014 at http://www.dec.ny.gov/energy/1603.htm

NYSDEC OHMS Document No. 201166576-00038

5. *Vegetation and Wildlife*

100. Gas Free Seneca states that the EA fails to discuss or include an invasive species plan. Arlington states that it will follow FERC's Plan during construction of Gallery 2 Project facilities. Section III.F of FERC's Plan requires Arlington to develop procedures to prevent the introduction/spread of invasive species. Given the relatively small area of disturbance for the Gallery 2 Project (a total of 6.60 acres) and the requirements of FERC's Plan, we conclude that there will be minimal potential for the introduction or spread of invasive species in the Gallery 2 Project area.

101. Gas Free Seneca states that the EA's discussion of impacts on migratory birds is too conclusory, that there is no analysis to suggest that increased noise would individually or cumulatively impact migratory birds, that the EA lacks a comprehensive discussion of how construction would affect migratory birds during construction, and that the EA does not provide sufficient analysis to support its findings.

102. As described in the EA, a review of the Gallery 2 Project's potential effects on migratory birds was conducted in consultation with the U.S. Fish and Wildlife Service (FWS). Section B.4.1 of the EA describes that the Gallery 2 Project site is not within a bird conservation area or an important bird area and would provide only marginal habitat for wildlife, and as such, provides only marginal habitat for migratory birds. The EA concludes that based on the existing condition and use of the site and the presence of similar and other more valuable habitats in the area; the effects of construction on migratory birds would be minor.

103. The EA also concludes that operation of the Gallery 2 Project would have no significant impact on use of the site by migratory birds. Less than 1.0 acre of habitat would be permanently lost, disturbed lands would be restored and allowed to revert to pre-project conditions, and additional noise attributable to the increased compression would be minor. Because no evidence has been provided to sufficiently call into question the EA's findings and our consultation with the FWS, we concur that construction and operation of the Gallery 2 Project will not significantly affect migratory birds.

6. *Alternatives*

104. Gas Free Seneca, the Schuyler County Environmental Management Council, and several other commenters in support of Gas Free Seneca claim that the EA fails to adequately consider the no-action alternative. Section C.1.0 of the EA evaluates project alternatives, including the no-action alternative, energy conservation alternatives, source alternatives, and storage alternatives. The EA concludes that under the no-action alternative, the objective of the Gallery 2 Project to provide firm natural gas storage capacity to satisfy growing demand in the northeast would not be met. It is possible that without the proposed Gallery 2 Project the storage capacity and seasonal peak-day demands may be met by alternative projects or energy sources, potentially resulting in additional impacts on the environment. Other natural gas companies could construct projects in substitute for the natural gas storage service proposed by Arlington. Such alternative projects could require the construction of additional and/or new storage facilities in the same or other locations to store the gas volumes proposed by the Gallery 2 Project. These projects would result in their own set of specific environmental impacts that could be equal to or greater than those described for the current proposal. Furthermore, it is speculative to predict what action might be taken by policymakers or end users in response to the no-action alternative.

105. The EA states that energy conservation and energy alternatives, such as renewable energy sources (wind and solar), when compared to natural gas storage, would be ineffective at reducing peak daily demands. Further, the EA finds that other energy sources, such as oil, propane, coal, and wood could be used to satisfy peak daily demands; however, these sources of energy would result in greater air emissions and long-term environmental impact when compared to the proposed Gallery 2 Project. We find that the EA adequately addresses these alternatives.

106. Gas Free Seneca states that the EA fails to consider other existing underground facilities located in less sensitive areas, and the EA should consider whether the vast increased supply of natural gas in nearby Pennsylvania and Ohio could be transported to obviate the need for additional storage in the Finger Lakes region.[72]

107. The EA evaluates other storage alternatives within the region that would allow for the requisite storage working capacity and similar system flexibility and deliverability options. Several storage alternatives were considered, including the development of new storage facilities such as depleted reservoir storage and cavern storage. Section C.2.0 of the EA identifies three underground natural gas storage facilities in the northeast and concludes that development of the necessary storage capacity at any of these facilities would result in greater construction, environmental, and landowner impacts when compared to

[72] Gas Free Seneca also asserts that "to the extent the Project approval facilitates new well development in the areas just to the south of the Project location, the upstream impacts of the new storage construction should be included in FERC's environmental analysis." Gas Free Seneca October 15, 2013 Comments at 11. New well development is not reasonably foreseeable as it is unknown how much, if any, such development will result from the Project, or where any potential development may be sited, nor does Gas Free Seneca attempt to support its speculation regarding the likelihood of future development. Moreover, even if a meaningful analysis of potential well development "facilitated" from the Project was possible, it is unclear how this analysis would inform our analysis of the "no action alternative."

NYSDEC OHMS Document No. 201166576-00038

Arlington's proposed Gallery 2 Project. In addition, these alternatives would require an adequate supply of raw water for cavern leaching, as well as brine storage and disposal. When compared to the proposed action, Arlington's Seneca Lake Project is unique in terms of its proximity to existing natural gas pipeline infrastructure, as well as U.S. Salt's existing brine storage and handling facilities. Lastly, other means of providing natural gas to the region, such as direct pipeline infrastructure from shale gas producing regions that could meet the Gallery 2 Project's objective has not been proposed and is not currently before the Commission for evaluation.

7. *EA vs. EIS*

108. Gas Free Seneca believes the preparation of an EIS, rather than an EA, is necessary in order to consider the direct, indirect, and cumulative impacts associated with the Gallery 2 Project. The CEQ regulations implementing NEPA state that one of the purposes of an EA is to assist agencies in determining whether to prepare an EIS or a finding of no significant impact.[73] Consistent with CEQ's regulations, the Commission's policy is to prepare an EA, rather than an EIS, if our initial review indicates that a project is not likely to be a major federal action significantly affecting the quality of the human environment. The Commission's years of experience with NEPA implementation for natural gas projects indicate that the Gallery 2 Project as presented in Arlington's application and subsequent modifications to the project would not fall under the "major" category for which an EIS is automatically prepared. As indicated in the EA, no significant impacts will occur as a result of the construction, and operation of the Gallery 2 Project. We affirm the EA's findings and reject Gas Free Seneca's assertion that an EIS is required.

109. Based on the analysis in the EA, we conclude that if constructed and operated in accordance with Arlington's application and supplements, and in compliance with the environmental conditions in the appendix to this order, our approval of this proposal would not constitute a major federal action significantly affecting the quality of the human environment.

110. Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.[74]

IV. Conclusion

111. At a hearing held on May 15, 2014, the Commission, on its own motion, received and made a part of the record in this proceeding all evidence, including the application, as supplemented, and exhibits thereto, submitted in support of the authorizations sought herein, and upon consideration of the record,

The Commission orders:

(A) A certificate of public convenience and necessity is issued to Arlington to construct and operate the Gallery 2 Project, as described and conditioned herein, and as fully described in the application.

(B) The certificate authority issued in Ordering Paragraphs (A) is conditioned on Arlington's compliance with all applicable Commission regulations under the NGA, including but not limited to the terms and conditions in Part 157 and paragraphs (a), (c), (e), and (f) of section 157.20 of the regulations.

(C) Arlington must comply with the engineering conditions set forth in Appendix A to this order.

(D) Arlington must comply with the environmental conditions set forth in Appendix B to this order.

(E) The facilities authorized herein must be constructed and made available for service within two years of the issuance of this order pursuant to section 157.20(b) of the Commission's regulations.

(F) Arlington must work proactively with its affiliate, U.S. Salt, if U.S. Salt's cavern development program proposes any new cavern closer to Arlington's Seneca Lake Project boundaries than Cavern Well No. 58 to ensure no new caverns are developed within 300 feet of either Gallery 1 or Gallery 2.

(G) Arlington shall notify the Commission's environmental staff by telephone, electronic mail, and/or facsimile of any environmental noncompliance identified by other federal, state, or local agencies on the same day that such agency notifies Arlington. Arlington shall file written confirmation of such notification with the Secretary of the Commission within 24 hours.

(H) Arlington is authorized to continue to charge market-based rates for firm and interruptible storage and hub services as discussed above and subject to the conditions in this order.

(I) Arlington is granted a waiver of the Commission's regulations that have been deemed inapplicable to storage providers with market-based rates, as discussed in this order.

---

[73] *See* 40 C.F.R. § 1508.9 (2013).

[74] *See, e.g., Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988); *National Fuel Gas Supply v. Public Service Commission*, 894 F.2d 571 (2d Cir. 1990); and *Iroquois Gas Transmission System, L.P., et al.*, 52 FERC ¶ 61,091 (1990) and 59 FERC ¶ 61,094 (1992).

NYSDEC OHMS Document No. 201166576-00038

Appendix A

Engineering Conditions for the Gallery 2 Project

Docket No. CP13-83-000

This authorization is subject to the following engineering conditions:

1. The maximum inventory of natural gas stored in each cavern, and at the entire Seneca Lake facility, shall not exceed the certificated levels stated in the table below at 14.73 psia and 60° F without prior authorization by the Commission. The maximum shut-in stabilized pressure gradient for Gallery 1 and Gallery 2 shall not exceed 0.9 psi/ft as measured at the casing shoe of the monitoring well. The minimum pressure gradient shall be limited to 0.20 psi/ft as measured at the casing shoe of the monitoring well.

	Gallery 1	Gallery 2	Seneca Lake
Base Gas capacity, Bcf	0.89	0.20	1.09
Working Gas capacity, Bcf	1.45	0.55	2.0
Total Gas capacity, Bcf	2.34	0.75	3.09

2. Before Gallery 2 is placed in-service, Arlington shall determine the final gas storage operating capacity, working gas capacity, cushion gas capacity and maximum and minimum pressures at the casing shoe of the monitoring well and file them with the Commission (including data and work papers to support the actual operating capacity determination).

3. Before commencing storage operations in Gallery 2, Arlington shall:

   (a) Conduct a Mechanical Integrity Test for the Gallery 2 caverns and cavern wells before initiation of each well/cavern to natural gas storage and file the results with the Commission;

   (b) File with the Commission copies of the latest interference tracer surveys, or other testing or analysis on the Gallery 2 caverns to verify the lack of communication between the caverns;

   (c) Establish and maintain a subsidence monitoring network over the proposed Gallery 2 caverns' storage area;

   (d) Assemble, test, and maintain an emergency shutdown system;

   (e) Conduct and file with the Commission the results of a new sonar survey of Gallery 2, including plan view and cross sections, and 3-D; and

   (f) Determine and file with the Commission the volume of rubble in Gallery 2, including the methodology of determining such volume.

4. Until one year after the storage inventory reaches or closely approximates the total authorized capacity for the Seneca Lake Project, Arlington shall twice annually conduct a leak detection test during storage operations to determine the integrity of the Gallery 1 and Gallery 2 caverns, well bore, casing and wellhead, and file the results with the Commission, unless otherwise ordered by the Commission.

5. Each of the Gallery 1 and Gallery 2 cavern wells shall be periodically logged to check the integrity of each casing string. Additionally, every five years, Arlington shall conduct sonar surveys of the Gallery 1 and Gallery 2 caverns to monitor their dimensions and shape, including the cavern roof, and to estimate pillar thickness between openings throughout the storage operations, and file the results with the Commission. In the alternative, no less than 30 days before placing Gallery 2 into service, Arlington may file with the Commission, for prior approval of the methodology, a detailed cavern integrity monitoring plan that is consistent with the intent of the sonar survey.

6. Arlington shall conduct annual inventory verification studies on Gallery 1 and Gallery 2, and file the results with the Commission.

7. Arlington shall operate the Seneca Lake Project in such a manner as to maintain the integrity of the Gallery 1 and Gallery 2 caverns and to prevent gas loss from the caverns. Arlington shall monitor both Galleries for any gas loss, and monitor the surface in and immediately around the Seneca Lake Project facility boundaries for any surface expression of gas migration.

8. Arlington shall file with the Commission semi-annual reports (to coincide with updates of the maximum and minimum storage pressures) containing the following information in accordance with section 157.214(c) of the Commission's regulations (volumes shall be stated at 14.73 psia and 60° F, and pressures shall be stated in psia):

   (a) The daily volume of natural gas injected into and withdrawn from the Gallery 1 and Galley 2 caverns;

   (b) The inventory of natural gas and shut-in wellhead pressure for the Gallery 1 and Gallery 2 caverns at the end of each reporting period;

   (c) The maximum daily injection and withdrawal rates experienced for the storage field during the reporting period, and the average working pressure on

NYSDEC OHMS Document No. 201166576-00038

such maximum days, taken at a central measuring point where the volume injected or withdrawn is measured;

(d) The results of any tests performed to determine the actual size, configuration, or dimensions of the Gallery 1 and Gallery 2 caverns;

(e) A discussion of any operating problems and conclusions;

(f) Other data or reports which may aid the Commission in the evaluation of the storage project.

9. Arlington shall file semiannual reports in accordance with section 157.214 (c) of the Commission's regulations until the maximum inventory reaches or closely approximates the maximum capacity authorized and for a period of one year following.

Appendix B

Environmental Conditions for the Gallery 2 Project

Docket No. CP13-83-000

As recommended in the environmental assessment (EA), this authorization includes the following conditions:

1. Arlington shall follow the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests) and as identified in the EA, unless modified by the Order. Arlington must:

   a. request any modification to these procedures, measures, or conditions in a filing with the Secretary of the Commission (Secretary);

   b. justify each modification relative to site-specific conditions;

   c. explain how that modification provides an equal or greater level of environmental protection than the original measure; and

   d. receive approval in writing from the Director of the Office of Energy Projects (OEP) **before using that modification**.

2. The Director of OEP has delegated authority to take whatever steps are necessary to ensure the protection of all environmental resources during construction and operation of the project. This authority shall allow:

   a. the modification of conditions of the Order; and

   b. the design and implementation of any additional measures deemed necessary (including stop-work authority) to assure continued compliance with the intent of the environmental conditions as well as the avoidance or mitigation of adverse environmental impact resulting from project construction and operation.

3. **Prior to any construction of facilities,** Arlington shall file an affirmative statement with the Secretary, certified by a senior company official, that all company personnel, environmental inspectors (EI), and contractor personnel will be informed of the EI's authority and have been or will be trained on the implementation of the environmental mitigation measures appropriate to their jobs **before** becoming involved with construction and restoration activities.

4. The authorized facility location shall be as shown in the EA. **As soon as they are available, and before the start of construction,** Arlington shall file with the Secretary any revised detailed survey alignment maps/sheets at a scale not smaller than 1:6,000 with station positions for the facility approved by the Order. All requests for modifications of environmental conditions of the Order or site-specific clearances must be written and must reference locations designated on these alignment maps/sheets.

5. Arlington shall file with the Secretary detailed alignment maps/sheets and aerial photographs at a scale not smaller than 1:6,000 identifying all facility relocations, and staging areas, pipe storage yards, new access roads, and other areas that would be used or disturbed and have not been previously identified in filings with the Secretary. Approval for each of these areas must be explicitly requested in writing. For each area, the request must include a description of the existing land use/cover type, documentation of landowner approval, whether any cultural resources or federally listed threatened or endangered species would be affected, and whether any other environmentally sensitive areas are within or abutting the area. All areas shall be clearly identified on the maps/sheets/aerial photographs. Each area must be approved in writing by the Director of OEP **before construction in or near that area**.

   This requirement does not apply to extra workspace allowed by FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* and/or minor field realignments per landowner needs and requirements which do not affect other landowners or sensitive environmental areas such as wetlands.

   Examples of alterations requiring approval include all route realignments and facility location changes resulting from:

   a. implementation of cultural resources mitigation measures;

   b. implementation of endangered, threatened, or special concern species mitigation measures;

NYSDEC OHMS Document No. 201166576-00038

c. recommendations by state regulatory authorities; and

d. agreements with individual landowners that affect other landowners or could affect sensitive environmental areas.

6. **Within 60 days of the acceptance of the Certificate and before construction begins**, Arlington shall file an Implementation Plan with the Secretary for review and written approval by the Director of OEP. Arlington must file revisions to the plan as schedules change. The plan shall identify:

a. how Arlington will implement the construction procedures and mitigation measures described in its application and supplements (including responses to staff data requests), identified in the EA, and required by the Order;

b. how Arlington will incorporate these requirements into the contract bid documents, construction contracts (especially penalty clauses and specifications), and construction drawings so that the mitigation required at each site is clear to onsite construction and inspection personnel;

c. the number of EIs assigned, and how the company will ensure that sufficient personnel are available to implement the environmental mitigation;

d. company personnel, including EIs and contractors, who will receive copies of the appropriate material;

e. the location and dates of the environmental compliance training and instructions Arlington will give to all personnel involved with construction and restoration (initial and refresher training as the project progresses and personnel change);

f. the company personnel (if known) and specific portion of Arlington's organization having responsibility for compliance;

g. the procedures (including use of contract penalties) Arlington will follow if noncompliance occurs; and

h. for each discrete facility, a Gantt or PERT chart (or similar project scheduling diagram), and dates for:

(1) the completion of all required surveys and reports;

(2) the environmental compliance training of onsite personnel;

(3) the start of construction; and

(4) the start and completion of restoration.

7. Arlington shall employ at least one EI who shall be:

a. responsible for monitoring and ensuring compliance with all mitigation measures required by the Order and other grants, permits, certificates, or other authorizing documents;

b. responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract (see recommendation 6 above) and any other authorizing document;

c. empowered to order correction of acts that violate the environmental conditions of the Order, and any other authorizing document;

d. responsible for documenting compliance with the environmental conditions of the Order, as well as any environmental conditions/permit requirements imposed by other federal, state, or local agencies; and

e. responsible for maintaining status reports.

8. Beginning with the filing of its Implementation Plan, Arlington shall file updated status reports with the Secretary on a **biweekly** basis until all construction and restoration activities are complete. On request, these status reports will also be provided to other federal and state agencies with permitting responsibilities. Status reports shall include:

a. an update on Arlington's efforts to obtain the necessary federal authorizations;

b. the construction status of the project, work planned for the following reporting period, and any schedule changes for stream crossings or work in other environmentally-sensitive areas;

c. a listing of all problems encountered and each instance of noncompliance observed by the EI(s) during the reporting period (both for the conditions imposed by the Commission and any environmental conditions/permit requirements imposed by other federal, state, or local agencies);

d. a description of the corrective actions implemented in response to all instances of noncompliance, and their cost;

e. the effectiveness of all corrective actions implemented;

f. a description of any landowner/resident complaints which may relate to compliance with the requirements of the Order, and the measures taken to satisfy their concerns; and

g. copies of any correspondence received by Arlington from other federal, state, or local permitting agencies concerning in-

NYSDEC OHMS Document No. 201166576-00038

stances of noncompliance, and Arlington's response.

9. **Prior to receiving written authorization from the Director of OEP to commence construction of any project facilities**, Arlington shall file with the Secretary documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof).

10. Arlington must receive written authorization from the Director of OEP **before placing the project into service**. Such authorization will only be granted following a determination that rehabilitation and restoration of areas affected by the project are proceeding satisfactorily.

11. **Within 30 days of placing the authorized facilities in service**, Arlington shall file an affirmative statement with the Secretary, certified by a senior company official:

    a. that the facilities have been constructed in compliance with all applicable conditions, and that continuing activities will be consistent with all applicable conditions; or

    b. identifying which of the Certificate conditions Arlington has complied with or will comply with. This statement shall also identify any areas affected by the project where compliance measures were not properly implemented, if not previously identified in filed status reports, and the reason for noncompliance.

12. Arlington shall file a noise survey with the Secretary **no later than 60 days** after placing the project compressor unit in service. If a full power load condition noise survey is not possible, Arlington shall file an interim survey at the maximum possible power load **within 60 days** of placing the project compressor unit in service and file the full load survey **within 6 months**. If the noise attributable to the operation of the project compressor unit at full or interim power load conditions exceeds a day-night noise level of 55 decibels on the A-weighted scale at any nearby noise-sensitive areas, Arlington shall file a report on what changes are needed and shall install the additional noise controls to meet the level **within 1 year** of the in-service date. Arlington shall confirm compliance with the above requirement by filing a second full power noise survey with the Secretary **no later than 60 days** after it installs the additional noise controls.

[¶ 61,121]

North Dakota Pipeline Company LLC, Docket No. OR14-21-000

Order on Petition for Declaratory Order

(Issued May 15, 2014)

Before Commissioners: Cheryl A. LaFleur, Acting Chairman; Philip D. Moeller, John R. Norris, and Tony Clark.

1. On February 12, 2014, North Dakota Pipeline Company LLC (North Dakota Pipeline)[1] filed a petition for declaratory order seeking certain rulings regarding its Sandpiper Project.[2] North Dakota Pipeline seeks approval of a tariff structure involving committed rates for priority and non-priority service, as well as uncommitted rates and apportionment principles that are based on Commission precedent. As discussed more fully below, the Commission grants North Dakota Pipeline's petition.

Background

2. The Sandpiper Project is intended to increase substantially the pipeline capacity available for Bakken crude oil produced in western North Dakota and eastern Montana to access downstream markets. The increased capacity will have major benefits to producers of Bakken crude by permitting production to reach market hubs that provide premium netbacks to area producers. The Sandpiper Project comprises two major segments—the Upstream Expansion and the Downstream Extension. The Upstream Expansion will consist of a 24-inch pipeline running 375 miles from Beaver Lodge, North Dakota to Clearbrook, Minnesota that will parallel the existing North Dakota Pipeline System mainline. The new line will increase the initial annual average capacity into Clearbrook, Minnesota to approximately 440,000 barrels per day (bpd) (an increase of

[1] North Dakota Pipeline was known as Enbridge Pipelines (North Dakota) LLC, prior to November 25, 2013. The company name changed to reflect Williston Basin Pipeline Company LLC's purchase from Enbridge Energy Partners L.P. of a 37.5 percent interest in the Class B Units of Enbridge Pipelines (North Dakota) LLC.

[2] An earlier petition for declaratory order relating to the Sandpiper Project was denied by the Commission without prejudice in *Enbridge Pipelines (North Dakota) LLC*, 142 FERC ¶ 61,212 (2013). The Commission found that Enbridge North Dakota had not filed a proposal seeking approval of the lawfulness of rate structures or terms of service that was appropriate for consideration in a petition for declaratory order. The Commission also found the proposed rates lacked supporting schedules pursuant to the Commission's regulations as well as any documents that would qualify as an uncontested settlement. *Id.* at P 30.

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 2

NYSDEC OHMS Document No. 201166576-00038

Storage of Hydrocarbons in Cavities in Bedded Salt Deposits Formed by Hydraulic Fracturing

Charles H. Jacoby
International Salt Company
Detroit, Michigan

ABSTRACT

In the last two decades a new concept of hydrocarbon storage has been created by the dissolving of cavities in salt and the use of these cavities for hydrocarbon storage. Storage operations in bedded salt are dissimilar to those in dome type deposits. Similarly, the operation of cavities formed by hydraulic fracturing varies from single well jug type operations.

Fractured cavities, although creating more space for the storage of product, are more severely influenced by the geology of the salt deposit. This is true, not only from the standpoint of creating the cavity but also with respect to its operation. Pressure variation created by the input of product and its subsequent recovery, together with the character of the recycling fluid, is of utmost importance.

INTRODUCTION

Until recently, little was actually known about the geology of the bedded salts of the Appalachian Basin. Gradually there are emerging a few basic concepts which tend to explain some of the more complex geological problems that are being encountered in this area today. The existence of this complex geology has been shown during recently accelerated activities in the storage of hydrocarbons, exploration for new salt mines and development of brine fields. The number of new mines in the northeast section of the United States and adjacent to Canada has, in the last ten years, increased from 4 to 9. This increase in the number of salt mines was brought about by the increase in salt consumption in the United States from 16,053,802 tons in 1947 to 34,687,000 tons in 1965.

In 1948, a far reaching experiment was conducted in Keystone County, Kansas by a man named Ballue. In his experiment, Mr. Ballue took advantage of the extremely low permeability of salt to successfully store liquified petroleum gas in an artifically leached salt cavern. It is true that for many years prior to this time, dry salt mines had been used for the storage of various commodities and art treasures but never before had L.P.G. been stored in bedded salt.

This seemingly simple idea has blossomed until now over 17 billion gallons of liquified petroleum gas is stored annually in salt cavities in the United States. The full importance of this storage comes into focus when one realizes that a major portion of this same volume of gas was previously flared or burned at the refinery. If one multiplies this volume of gas by a wholesale price of 10¢ per gallon, you arrive at a rough estimate of the value of Mr. Ballue's idea—$1,700,000,000 per year.

As a waste product, propane, butane and isobutane are hazardous and the economic attendant with their surface storage in large volumes is adverse. Depending upon the type of product and the conditions necessary for its storage and recovery, underground storage can be accomplished for a cost of 1/20th to 1/100th that of surface storage. At the present time, such facilities as International Salt Company's Watkins Glen, New York plant have a static capacity of some 4,000,000 barrels in two cavities created by hydraulic fracturing.

Another visionary, Mr. H.L. Gentry, in 1961 undertook an experiment at St. Clair, Michigan, in which over 300 million cubic feet of natural gas was successfully stored in an abandoned single well brine cavity. Again a major contribution had been

NYSDEC OHMS Document No. 201166576-00038

made to our standard of living, for now large amounts of natural gas can be stored in anticipation of consumer demand during the peak period of extremely cold weather when fuel demands are at a maximum.

Faulting—Watkins Glen, N.Y.

Watkins Glen, New York is one of two locations in the United States where L.P.G. is being stored in fractured cavities. A recent geological interpretation of the structure of the Watkins Glen area is shown in Figure 1. The four wells forming this cross section are in an eastwest direction. As is illustrated in this figure, both the top and bottom of the salt are horizontal in parallel planes. The underlying Vernon shale has a slight regional dip to the south. All wells in the cross section were cored and logged with gamma neutron tools.

When the original wells were drilled in this area, the number of major salt sequences were unknown. Thus as the first wells were drilled, six salts were delineated. The contact between the bottom salt and the underlying Vernon shale is sharp and smooth, forming a plane along which the entire salt series was thrust toward the north-northwest.

Because of the differential pressures exerted against the front of the evaporite mass and the variations in frictional resistance, movement was not uniform. Tear faults developed in the salt layers and the intervening strata of rock. Isopach maps of area show that major movement has occurred adjacent to Lake Senaca with a noticeable reduction in the amount of thrusting action in a westerly direction.

Gamma neutron logs show repeated rock sections in Wells 27, 28, 30 and 31. In Wells 27 and 28 the B2 salt, in keeping with Landes's nomenclature, has been thrust over itself and a horizontal fragment of the B2 rock, on two separate tectogenetic occurrences. The D1 salt has, in Well 27, almost doubled its normal thickness. This was due to either an overthrust of the D1 salt within itself or concurrent sedimentation during the downdropping of the C2 rock. The F unit of salt has

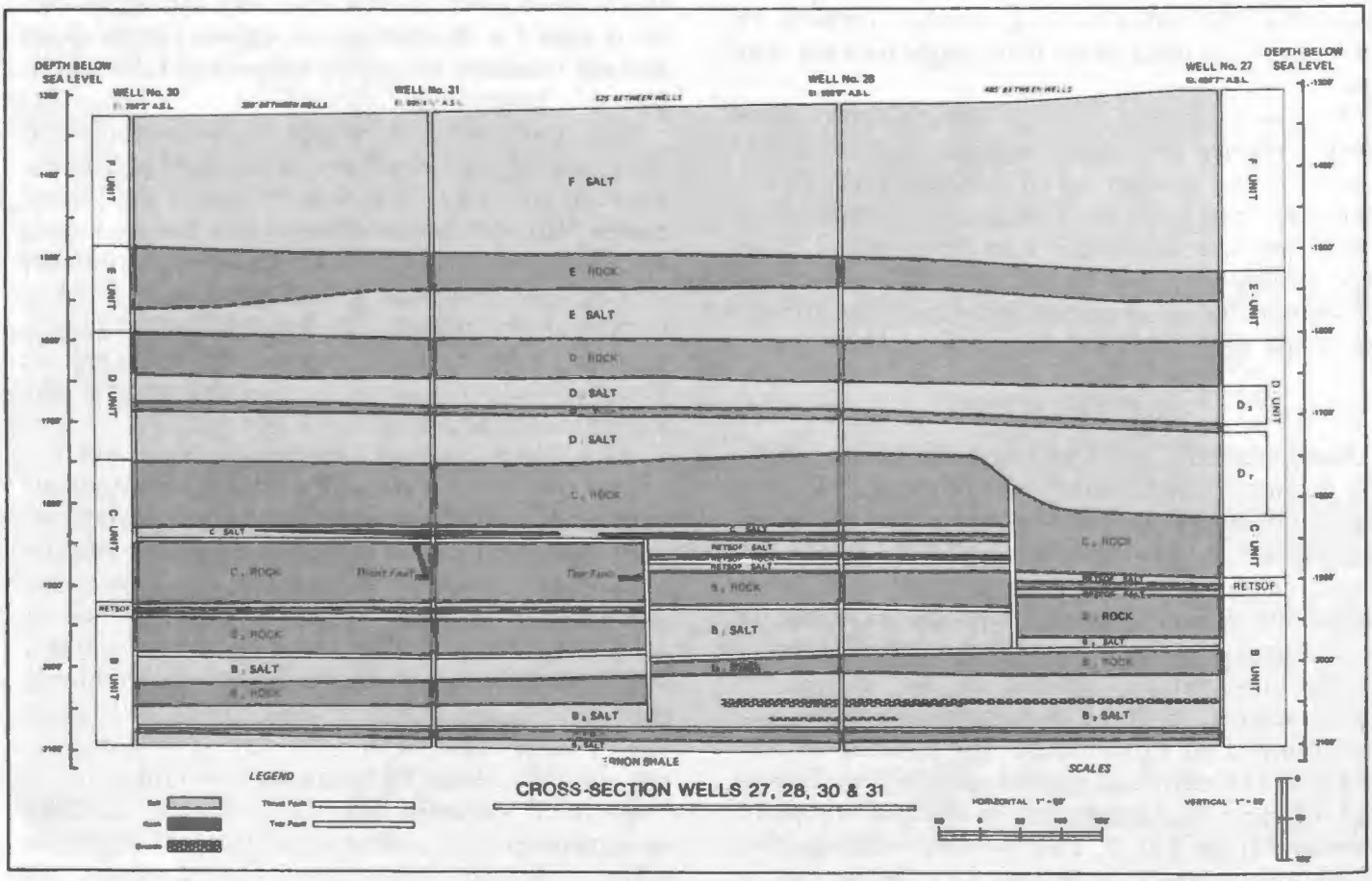


Figure 1.

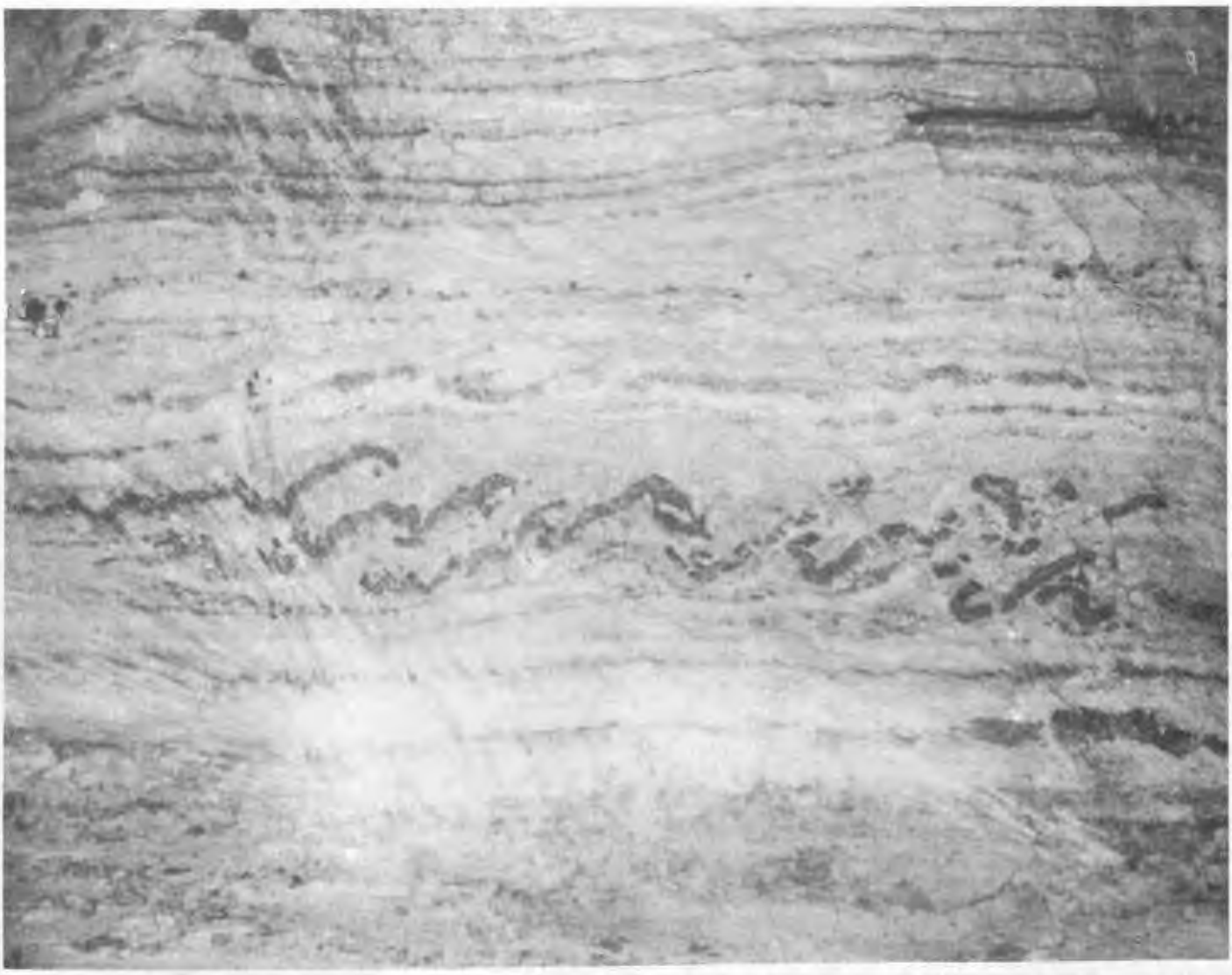
NYSDEC OHMS Document No. 201166576-00038

experienced a considerable increase in thickness in Well 27 over the other three wells involved in the cross section. The points of faulting as originally observed in the gamma neutron logs were confirmed by re-examination of the detail lithological logs and cores. At the points on the cross section where faulting has been confirmed, fault zones several feet in thickness are present. This generalized cross section does not attempt to take into consideration all the evidences of faulting but only those of primary concern.

An example of this low angle thrusting section is illustrated by photograph #1 which shows micro thrust faulting within the bed of salt being mined by International Salt Company at their Cleveland Mine. Here both the upper and lower laminae of the salt bed are essentially horizontal and parallel to each other. The mid-section of the bed has experienced a thrust action which has folded and then overthrust the dolomitic anhydritic rock stringer upon itself.

In photograph #2 this same rock stringer at another point in the Cleveland Mine can be seen overthrusting itself. Again it is underlain and overlain by horizontal laminae which are generally flat lying.

Recently, the Morton Salt Company in their drilling at Himrod, New York, found good core hole evidence of a tear fault similar to those in the Watkins Glen area. After nearing completion of a core hole which depicted what was considered to be a normal sequence of salt-rock strata, a zone of



Photograph 1. Cleveland Mine. Micro-thrust faulting shown in a mine face.

NYSDEC OHMS Document No. 201166576-00038

Photograph 2. Cleveland Mine. Micro-thrust faulting shown in a mine face.

lost circulation was encountered in a salt bed. Plugging the hole back up to a point above the top salt, a whipstock was set and the strata recored. This deflected core hole encountered huge thicknesses of salt which in no way correlated with the original hole but were representative of a tear fault.

L.P.G. and hydrocarbon storage.

In the hydraulic fracturing of salt beds to coalesce two wells, either for the solution mining of salt or the creation of hydrocarbon storage facilities, it has been learned that once fluid circulation has been established between the injection well and the target well, a pressure "prop" of the fracture between the two wells must be maintained until a self-supporting opening has been created. Failure to maintain sufficient pressure to prevent convergence of the overlying and underlying portions of the strata, will result in the "healing" of the fracture. Once this "healing" has occurred, we have never been able to re-establish the fluid connection. It is our opinion that this "healing" is brought about by the same phenomenon observed in salt mine excavations. That is, dilation of the salt in the walls or pillars of the cavity; heaving of the floor, particularly where shale underlies the salt bed and sagging of the roof rock.

As the salt and rock close in on the opening, a crystalline halite begins to grow in the crevice until the void is completely filled. This crystal halite is substantially stronger in tension than the original primary salt, thus resisting refracturing. Thus in refracturing a well at the same point as that at which

NYSDEC OHMS Document No. 201166576-00038

it was initially fractured, after the collapse of the beds has occurred, the fracturing fluid will take a direction of secondary preference avoiding the target well. Advantage can be taken of this healing effect in refracturing at the point of the original fracture where the fluid in the original fracture has taken an undesired direction. It is this healing effect that allows fractured cavities in faulted salt beds such as those of New York, Ohio and Pennsylvania to be used for the storage of hydrocarbons.

The structural features found in the Salina Group underlying Watkins Glen, New York, are believed to be characteristic of the entire New York portion of the Appalachian Basin.

As related to the creation of cavities and the operation of these cavities for hydrocarbon storage, the significance of this type of structure is:

1. In the coalescence of wells by hydraulic fracturing, fractures which normally have a tendency of developing in an eastwest direction, can progress in these directions only until the fluid intersects one of the northsouth trending tear faults. Establishment of a second fracture from the original target well, designed to intersect the fracturing fluid previously trapped in the tear fault, has only a very modest chance for success.
2. Fracturing new pairs of wells in such an area, where L.P.G. is already being stored, entails the risk of encountering these storage cavities.
3. As illustrated in Gallery No. 2 of Figure 2 of June 1964, the fracture patterns are not predictable unless the detailed geology of the area is available and understood. Here fractures were produced in the lower portion of the B2 salt in both Wells 30 and 31. The connection between the two wells was finally completed in the fault zone in the overthrust block of the B2 salt.
4. Unless saturated brine is used continually in recycling the product, there is distinct possibility of undermining fault blocks. Illustrated

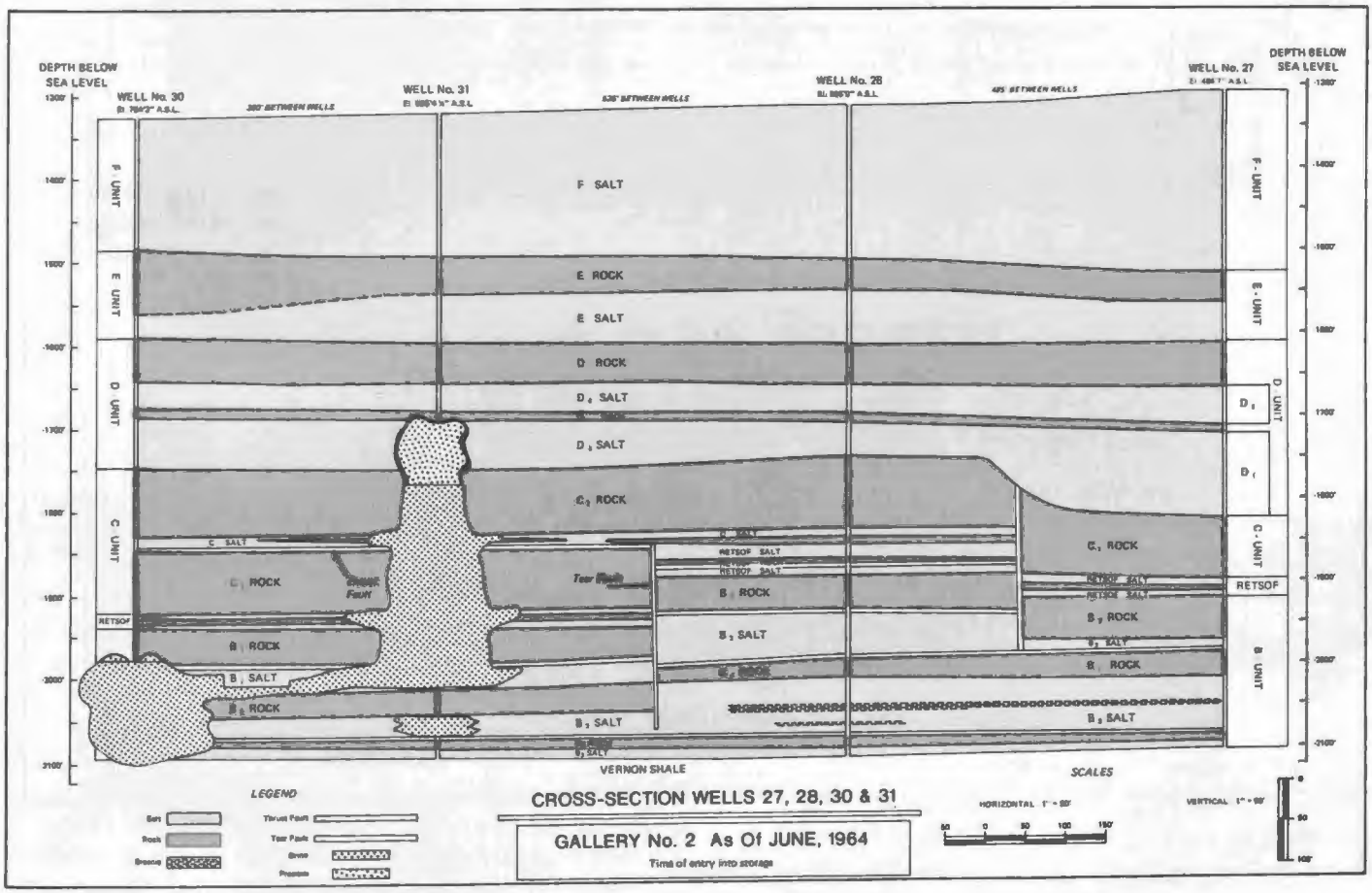


Figure 2.

NYSDEC OHMS Document No. 201166576-00038

in Figure 3 is a large block of rock calculated to weigh over 400,000 tons which fell from the roof even with the use of saturated brine. This portion of the cavity was outlined by using sonar surveying equipment. Although saturated brine is used for a recycling fluid, some minor quantities of salt will be dissolved so that the effluent from the brine well will be supersaturated. Steps must be taken to prevent the salting up of the brine well.

5. Where the brine recycled from the cavity is to be used in a salt refining or chlorine-caustic plant, considerable additional dissolved impurities in excess of those normally found, will be encountered. This condition results from the hydrocarbon flooding of the pile of detrital material associated with the injection well. As the residual brine in this pile of rock is flushed out of the pile, it severely contaminates the mass of brine in the open portion of the cavity.
6. Rock falls of small to medium volume (50 tons) may be unnoticed. Larger falls will form a cloudy brine or hydrocarbon if they occur during the storage or recycling operations. Normally, even the worst of these conditions will clear in 24 to 48 hrs. Wide fluctuations in cavity pressures during storing and recycling operations are one of the main factors in roof or ledge rock falls.
7. Entrapment "losses" are largely related to local dips of the rock beds. In areas such as the Appalachian Basin, rock masses unmined at a point removed from the bore of the well may collapse causing large volumes of product to be entrapped at this remote point.

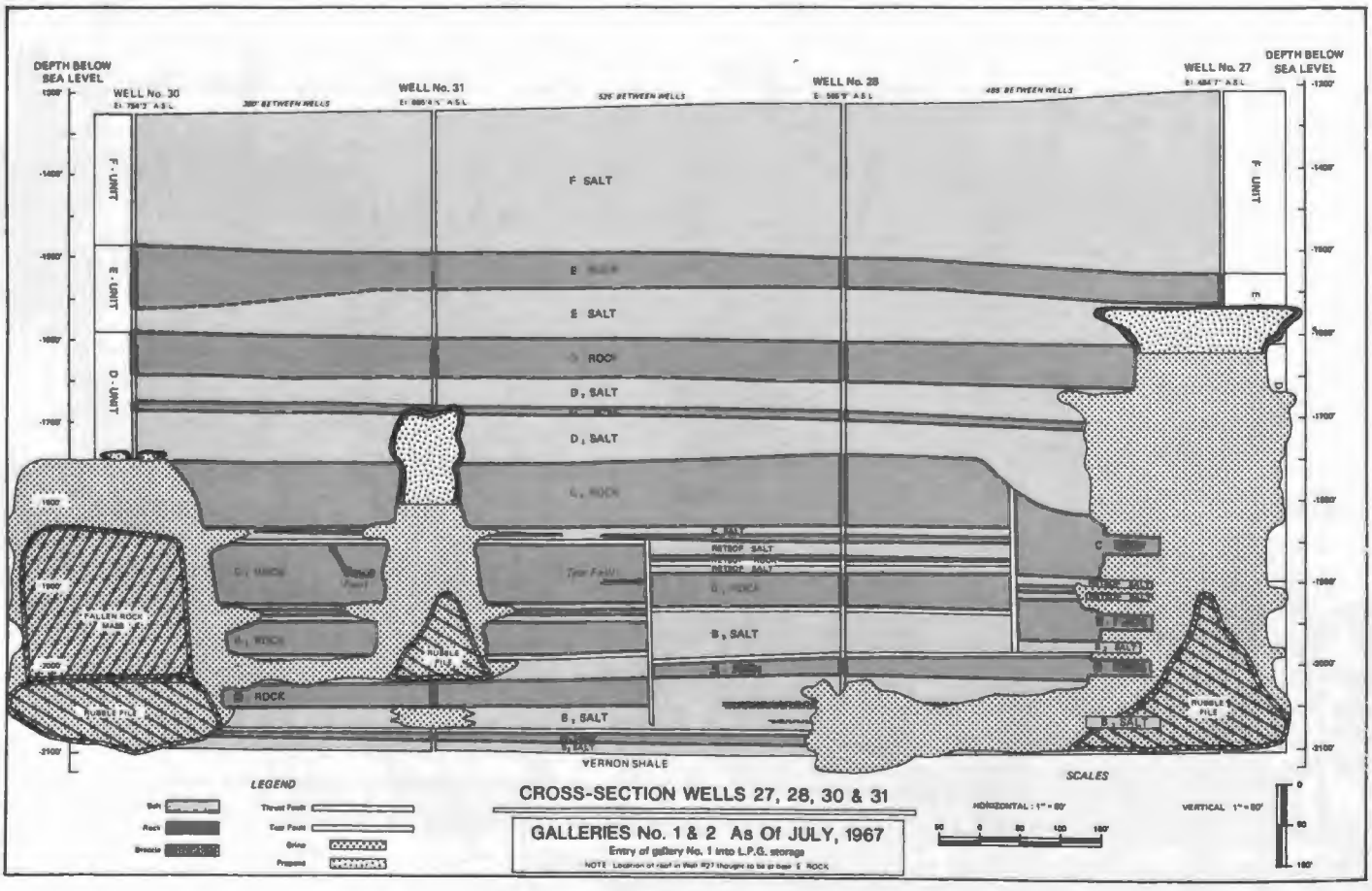


Figure 3.

NYSDEC OHMS Document No. 201166576-00038

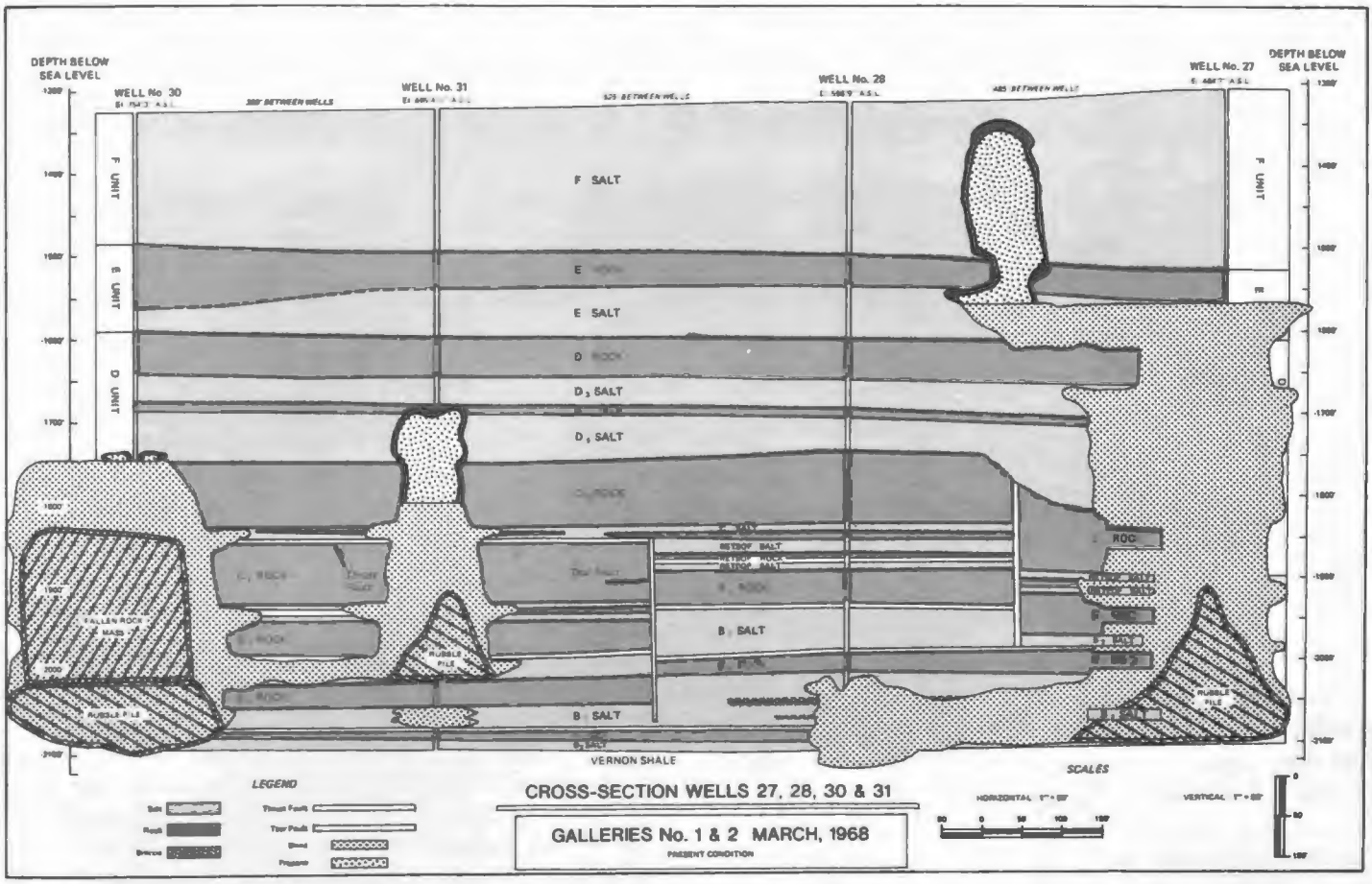


Figure 4.

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 3

NYSDEC OHMS Document No. 201166576-00038

Effect of Geology on the Hydraulic Fracturing of Salt

Charles H. Jacoby
International Salt Company
Detroit, Michigan

ABSTRACT

The paper is presented with the intent of bringing into focus a few of the many problems surrounding the successful fracturing of bedded salts. The results of hydraulic fracturing early in the history of the art left many unanswered questions. Based on continuous gathering and evaluation of data over the last ten years, some explanations are beginning to take form. Some of the individuals having the most experience have a "rule of thumb" which specifies, "If two wells do not connect in twenty-four hours, stop pumping." We believe that the major portion of these failures are based on geological irregularities.

A number of our questions concerning our fracturing operations at Watkins Glen, New York, have been answered by recent geological interpretations of salt disposition and subsequent deformation. Initial interpretation of structures based on the plastic flow and leaching of salt by ground water have given way in light of additional geological information to a theory of a system of thrust and normal faults. Former isopach and structural maps depicting folds and which failed to explain fracturing results have been completely discarded for the Watkins Glen area.

Areas such as Wayne County, Michigan, which are underlain by relatively flat dipping beds with gentle monoclinic folds can be shown by isopach maps. These beds, in some cases, have been disturbed by the ground water leaching of the salt with resulting secondary masses of crystalline salt being incorporated in the primary mass. In some locations, lithologic and/or chemical changes in the salt's composition are believed to be responsible for the erratic results obtained during hydraulic fracturing operations. Folding can develop fractures along the axis of the folds forming conduits along which solutions have a tendency to travel. Thus, both in salt beds which have been subjected to relatively sharp movement and those with only minor disturbance, the local geology plays a permanent role.

INTRODUCTION

A large percentage of the companies engaged in the extraction of salt from subsurface deposits by the solution method of mining have practiced the art of hydraulic fracturing with varying degrees of success. Very little has been written or otherwise divulged about any of these fracturing operations except those that are successful. A successful fracturing operation receives less attention, study and technical analysis than do the ones where difficulties are encountered.

Based on the information gathered in the Watkins Glen and Ludlowville, New York, areas over the last ten years, some explanations for our failures and difficult fractured connections are beginning to develop. For the purposes of this article which relates to bedded salt deposits, we have classified them into three major types. These are (1) The flat-lying deposits such as those in the vicinity of Wayne County, Michigan; (2) Folded deposits which are typified by the Ludlowville, New York, area; and (3) Faulted salt beds are represented by Watkins Glen, New York.

NYSDEC OHMS Document No. 201166576-00038

In all cases brought forth in this paper, we are basing our statements on virgin salt deposits in which there are no solution mining operations in relatively close proximity. It is known that solution mining operations adjacent to a new fracturing operation will have a direct bearing on the outcome of the fracture.

BEDDED SALT -- FLAT LYING

Wayne County, Michigan. The salt deposit underlying Wayne County, Michigan Metropolitan Airport was explored by drilling in 1955. The two and one-eighth inch slim hole cores delineated a flat-lying series of salt beds apparently disturbed only by minor monoclinic folding. Figure 1 is a stratigraphic cross section hinged on Hole # 2. This cross section illustrates the termination or "zero line" of the salt beds in the Michigan Basin. The lettering system used in Fig. 1 is a carry-over from a system used locally prior to 1900.

Between Core Hole # 2 and Core Hole # 3, an approximate distance of 2, 800 feet, six salt beds have been leached out completely by ground water. Using the thickness of the intervening rock layers, the collapsed breccia zones of these leached out salt beds were actually correlated in Core Hole # 3 and Core Hole # 4. The drilling of salt wells along the perimeter of the Michigan Basin

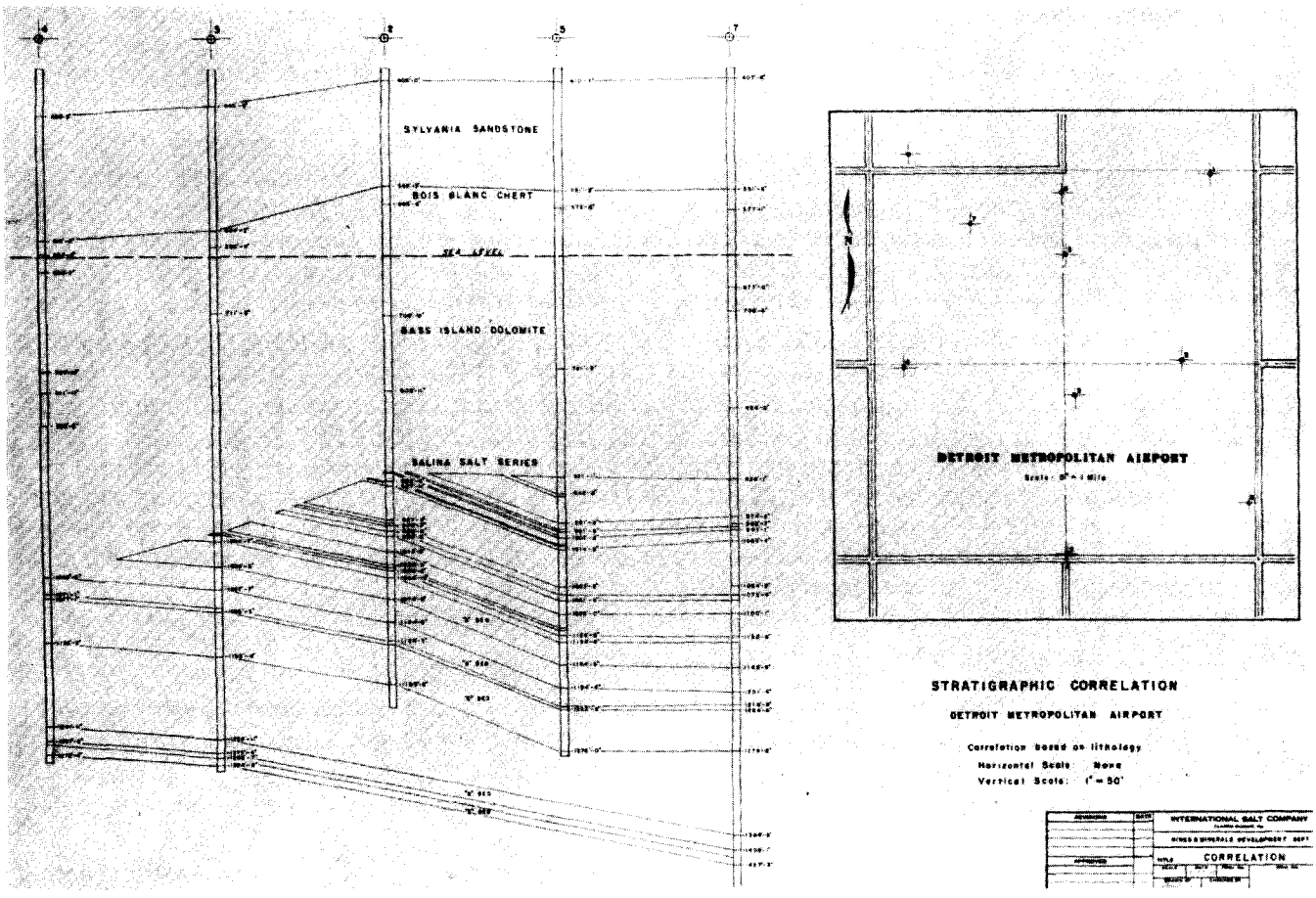


Figure 1

NYSDEC OHMS Document No. 201166576-00038

could have negative results unless careful correlation of the salt beds and their termination points are developed well in advance of any fracturing operations. Wells in which the salt beds were to be fractured could conceivably be drilled and penetrate large thicknesses of salt and yet be near enough to the termination point or zero line of these wells as to have the fracturing fluid travel to the zero line and be lost in the adjacent rock mass.

This possibility is illustrated in Fig. 2 which is an isopach of the "AA" bed. The strike of the zero line of this bed is approximately N52W. Core Hole # 8 disclosed a thickness in this bed of 31 feet. Theoretically, at a distance of less than 1,900 feet due west of Core Hole # 8, the bed is nonexistent.

It is our belief that in cases such as this, the direction of travel of the fracturing fluid would be perpendicular to the zero or line of termination if no other factors dominate. The truncation of this salt bed closely parallels the axis of the Howell anticline and may have resulted from its formation.

There are a number of other factors which in our opinion would influence the direction of flow of a fracturing fluid in flat-bedded salt deposits. Figure 3 shows horizontal laminae exposed in a 24-foot face in the Detroit Mine. It will be noted that these laminae terminate in a mass of salt crystal which constitutes secondary deposition. The laminated salt is primary. Where the seal of the salt bed has been ruptured after primary salt has been deposited, meteoric waters give rise to solution cavities with the resultant formation of included crystal masses.

This mass of crystal shown in Fig. 3 extends from the roof of the mine to the floor. Since the salt bed at this point was only 29 feet thick with four feet of salt in the roof and one foot remaining in the floor, we may assume that the zone extends from the top to the bottom of the bed. A fracturing fluid that migrated along a lamina of this bed would intercept this crystal mass. It is

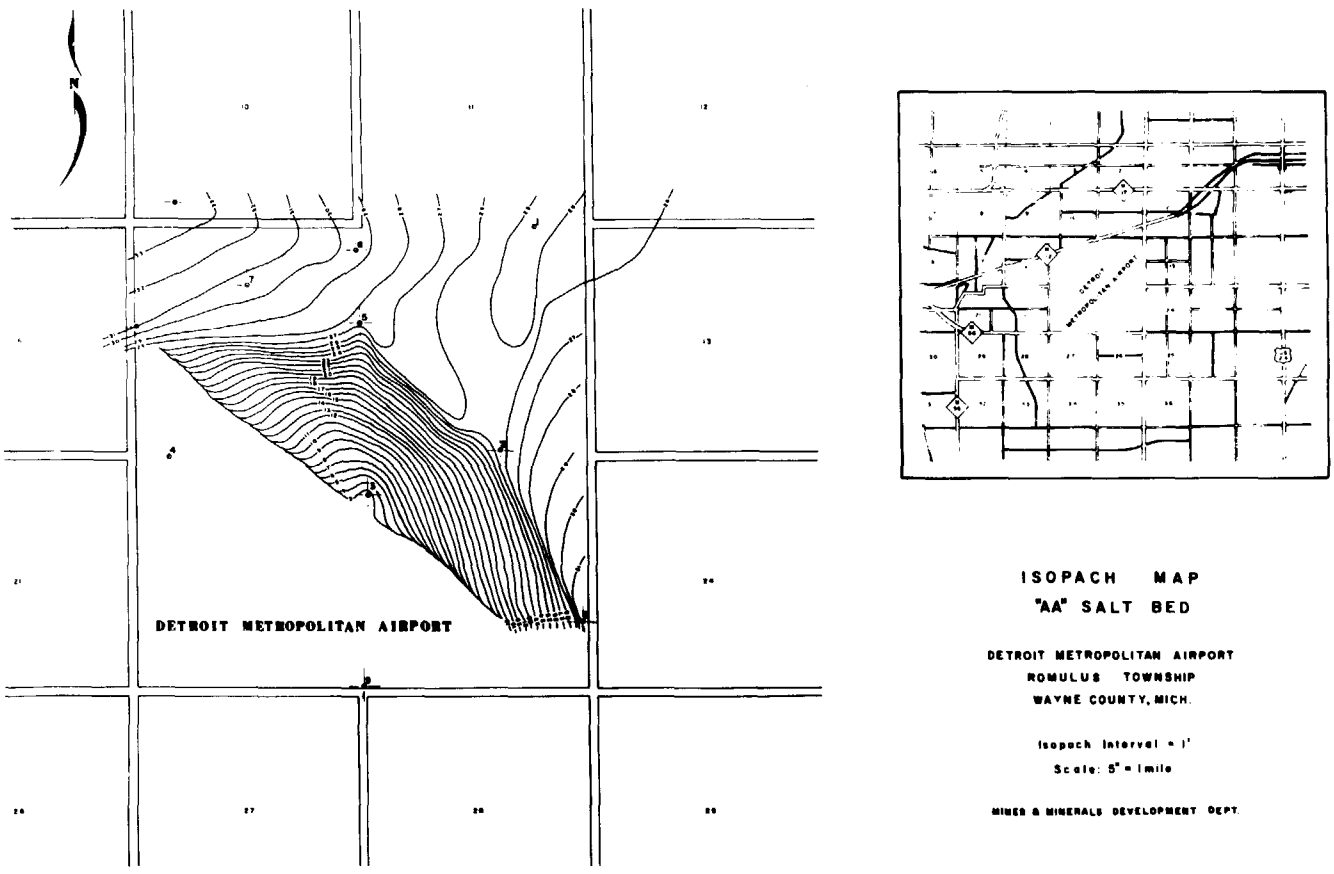


Figure 2

NYSDEC OHMS Document No. 201166576-00038

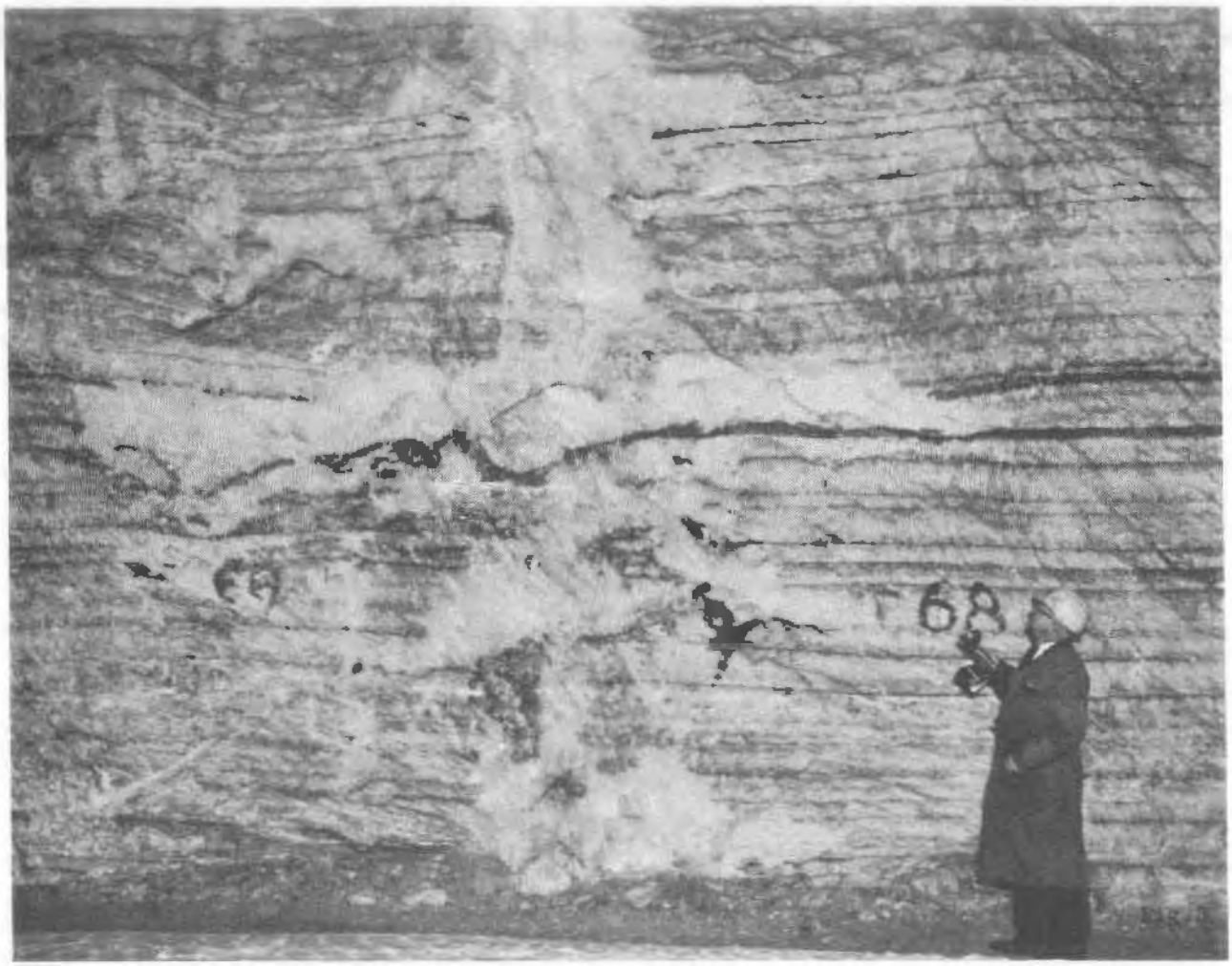


Figure 3

our opinion that at this point, the fluid would have a tendency to either travel parallel to the horizontal direction of the crystal mass or vertically to the top of the salt bed. At the top of the salt bed the fluid would follow the first major plane of weakness that it encountered, thus bed jumping would occur.

In isolated instances, these masses of crystal salt and their accompanying rock masses of solidified impurities have sufficient lateral continuity so that their rock inclusions have been termed "Rivers of Rock," Fig. 4 shows such an enclosed mass. We would not expect a fracturing fluid to split this mass but rather to follow its lateral direction. It may be noted that the salt in the upper portion of the bed is primary with horizontal laminations.

Lithological changes are known to occur in salt beds. An example of the occurrence of such a lithological change is associated with the shaft area of the Detroit Mine. When the shafts penetrated the Salina beds one was logged as "dolomite with salt inclusions." Within a few hundred years of the shaft area, the bed is a "salt, dirty with dolomitic inclusion and at a distance of 2,000 feet runs 95% NaCl. In the case of the "A-2" bed,[1] which is anhydrite in the area of the Metropolitan Airport, it becomes a bed of very pure salt in areas adjacent to and north of Detroit.

Fracturing fluids encountering a gradual change in the lithology of the salt would have a tendency to be deflected from their original direction into a new course. Likewise, impurities

[1] According to Dr. K.K. Landes.

NYSDEC OHMS Document No. 201166576-00038

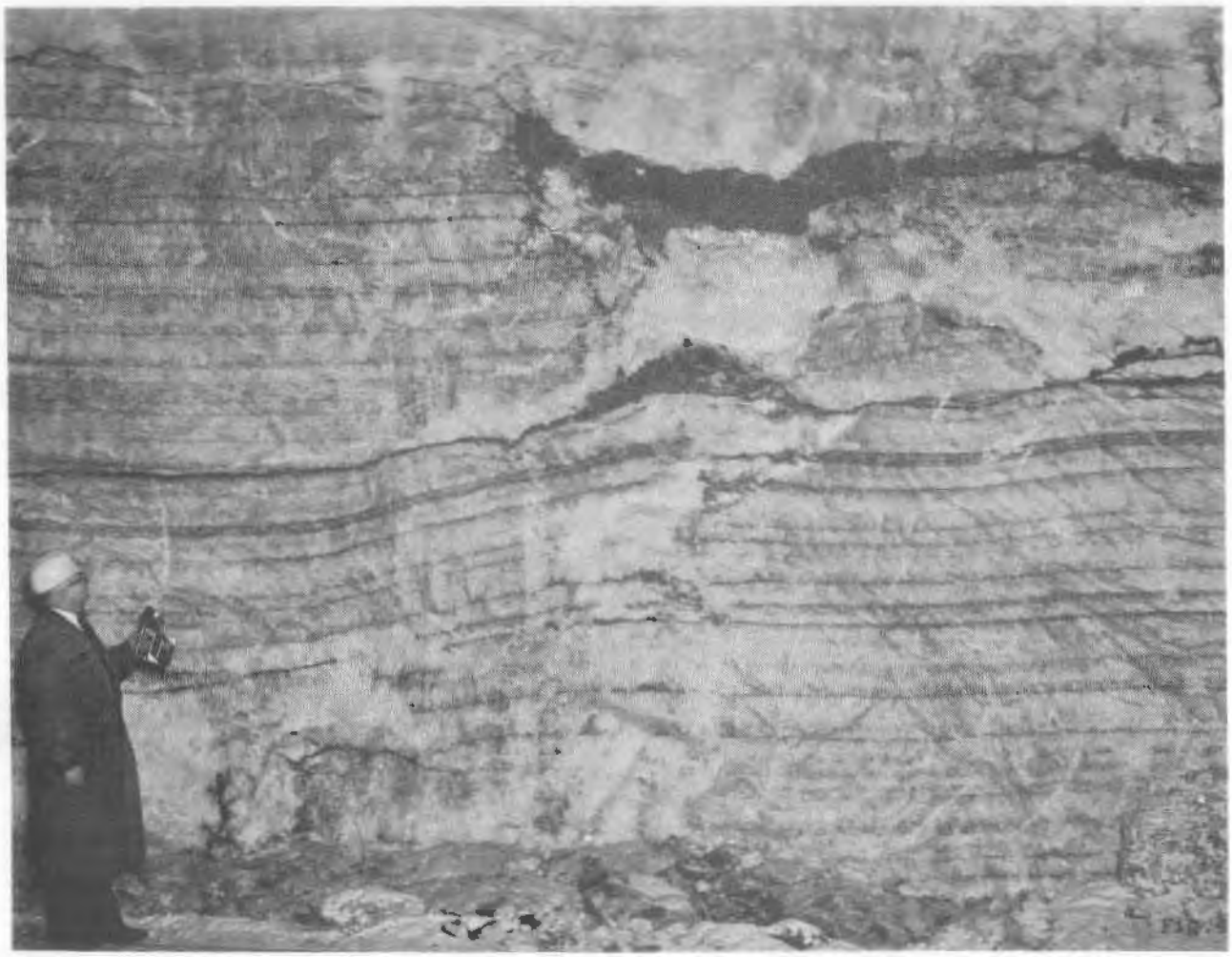


Figure 4

suspended in the fracturing fluid as a result of the dissolving of the salt, enter the crevice and alter the direction of fluid flow. As these insoluble impurities in the salt increase, their influence on direction increases.

FOLDED BEDS

In 1957 construction was begun on a new brine field at Ludlowville, New York. Based on the results of previous hydraulic fracturing operations at Watkins Glen, New York, we had come to the conclusion that the direction of fluid flow in fracturing operations where folded salt beds were involved, was parallel to the axis of these folds. It was our belief that in anticlinal structures the fluid flows more readily parallel to and at the top of any structural unit or member. Conversely, in a syncline, the bottom of a bed has a tendency to be in tension which would facilitate fluid flows along the bottom of the bed and, also, parallel to the axis of the fold. Desiring to conduct our brining operations as near the bottom of the salt bed as possible, we attempted to find a synclinal trough.

This was done by extrapolating from known geological information on the area adjacent to our proposed field and the adjoining wells of the old brine field. The data from this adjacent area, Fig. 5, showed the folding associated with the top of the 4th Salt which was the bed in which we were to attempt our proposed fracture. It was known that the soft rocks underlying the 4th Salt had suffered parallel but much more severe distortion. In some cases, recumbent folds exist at the contact between the bottom of the 4th Salt and the underlying rock. Trough to crest distances of

NYSDEC OHMS Document No. 201166576-00038

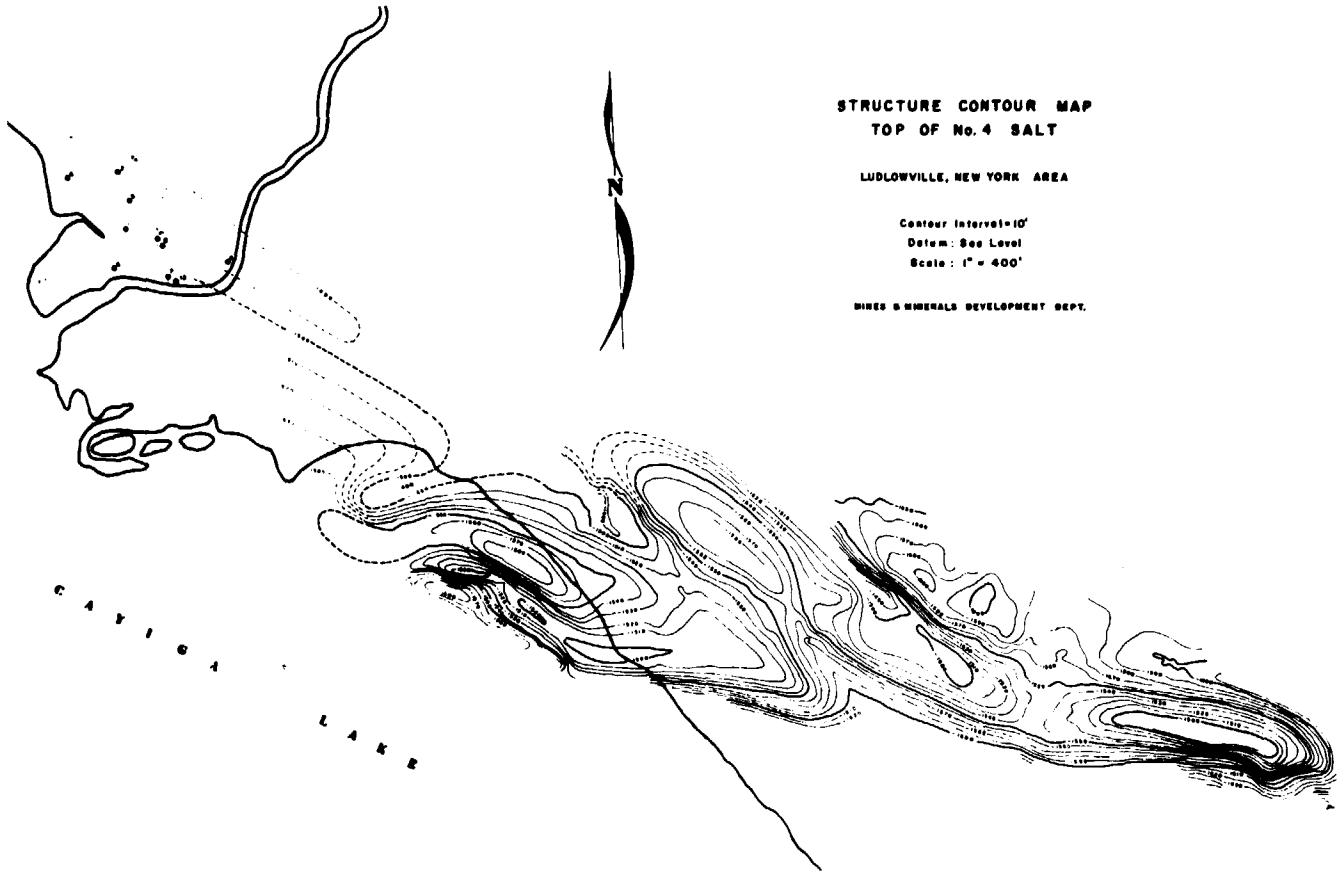


Figure 5

these folds on the bottom of the 4th Salt were as small as 200 feet with the isopach lines of the salt within this same distance ranging from six feet to 120 feet. This salt was considered as metamorphosed material. This made it imperative that both the injection well and the target well be located in the same trough.

The axial direction of the folds on the top of the 4th Salt was in an approximate direction of N65°W. By extrapolation we placed the center line of our injection well and our target well in this same orientation. The distance between these two wells was set at a nominal 500 feet.

Drilling on the injection well, Well # 20, was started by setting and cementing 20 feet of 16-inch conductor pipe. The hole was then continued with a 15-inch bit through this conductor string. Although the airline distance between Watkins Glen and Ludlowville, New York, is approximately 20 miles and the stratigraphy was thought to be the same. But the investigation showed a sharp difference in the character of the rock between the two locations. At Watkins Glen it normally required four to five 15-inch bits to penetrate 2, 100 feet. These footages included reaming of the salt sections after coring.

At a depth of 1, 500 feet, we started the coring of the Salina formation in keeping with our standard operating procedure of coring the salt sections of each new well. This is accomplished by use of a 50-foot double tube core barrel and a diamond bit. In the Watkins Glen area, this procedure with normal care has resulted in an average bit life of 3, 500 feet and a diamond salvage of 75%.

At a depth of 1, 584 feet ten and one-half inches our coring operations cut a periodotite sill which had a thickness of one foot six and one-half inches. This discovery was particularly disturbing in that, if the target well were on one side of the parent dike and the injection well on the other, we felt there could be no communication or coalescence of the two wells. Only one known dike existed in the area and none of the previous wells drilled in the area for oil, gas and salt had

NYSDEC OHMS Document No. 201166576-00038

reported sills or igneous material. The closest point of the only dike known to exist in the area was 8, 500 feet.

The strike of the dike's trace was N15°W. No geophysical work had been done in the area and, thus, a field decision had to be made from the data on hand. The target well, Well # 21, was relocated in a direction of N10°W from Well # 20. With this change in direction from the original N65°W, the distance was also changed from 500 feet to 400 feet. It was our opinion that we could by this reorientation of target well location, take advantage of the same planes of weakness which gave rise to the dike and which it had subsequently caused. The target well was completed, the injection well fractured and a fractured connection established between the two wells.

For reference in future development work, a magnetometer survey was run by Seismograph Services Corporation. This survey, Fig. 6, disclosed a dike due east of Well # 20 at a distance of 925 feet. The southern end of this dike had a trace of N10°W. The trace of this dike curved through a distance of approximately 1, 000 feet, which gave its northern end a direction of N40°W.

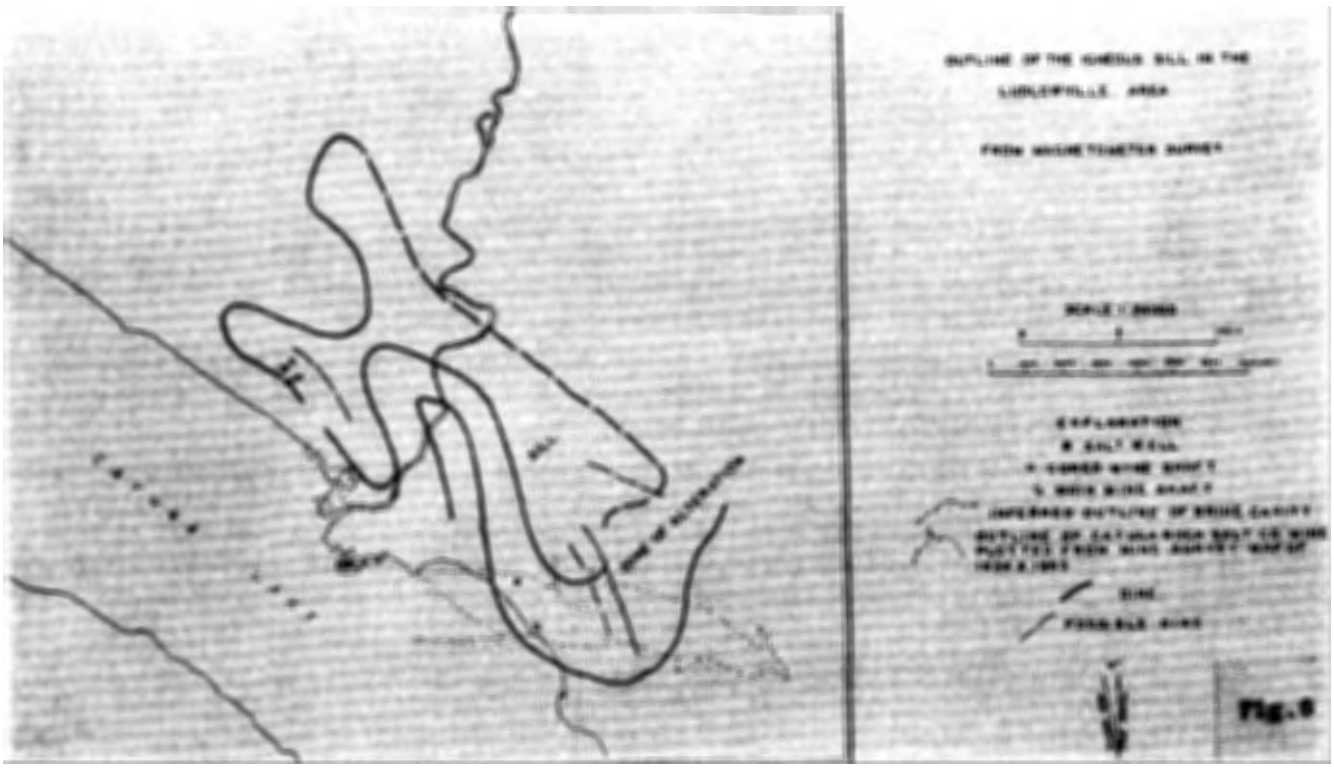


Figure 6

It is our opinion that if the two well locations had straddled this dike, no communication between the wells would have been possible. We believe that the fracturing fluid might have followed one of two courses. We consider that the most probable course would have been to encounter the dike, rise vertically to the first sill, and then flow under the sill in the line of least resistance. The second possibility would be to travel parallel to the dike in a horizontal direction.

FAULTED BEDS

The results of our initial fracturing operation at Watkins Glen were anything but desirable. In 1955 we fractured our first well, Well # 25. The target for this first injection well was a cavity which had one of its wells, Well # 24, just 200 feet north of Well # 25. A total of approximately 65, 000, 000 gallons of fluid was pumped into this well at an average rate of 400 gallons per minute over a nine-month period. Spaced intermittently during the 113 days were periods when we

NYSDEC OHMS Document No. 201166576-00038

allowed the fracture to "cure." After a period of ten days to two weeks of pumping, the well was "shut-in" under pressure. It was during one of the "curing" periods that the pressure recorder fell to zero and we found the well on vacuum. At the time, three reasons were thought to be responsible for our difficulties. These were:

1. Geology of the immediate area, which was largely an unknown quantity at that time.
2. The stress concentration surrounding the cavity which might have deflected any fractures.
3. Rock movement which subsequently induced crevices in the strata overlying the cavity, allowing the escape of the fracturing fluid.

The continued development of this new brine field included the establishment of what is now a standard operating procedure, the coring of the salt sections in each new well. From this exploration work in each of the newly developed wells, there evolved a much better understanding of the local geology. Subsequent wells were located more properly. Structure-isopach maps were developed for each of the salt beds. These geological maps seem to show folded formations with distinct trends that appeared to explain the direction of fluid flow.

In 1962 a pair of two-well galleries were drilled and fractured. Instead of the fracture proceeding in an east-west direction as had been previously experienced and in keeping with the structure maps, the fractures developed in a north-south direction. Well # 33 was an injection well with an intended target of Well # 32 across a distance of 735 feet. Unexpectedly, it connected with Well # 34, or almost due north, a distance of 745 feet. Within 24 hours after the fracture had been initiated, brine was being produced by the target well. The volume of brine produced quickly reached a point where it was proportional to the volume of water injected. The quality of brine with respect to calcium and magnesium chlorides was extremely high, thus being relatively poor for the production of evaporated salt. Pump pressures remained extremely high despite the fact that large quantities of salt were extracted. No second plateau ever developed.

It was surmised that fracturing fluid had passed horizontally along a faulted zone with at least a portion of the travel route being in shale layers. It was in these layers that the brine picked up the large percentages of calcium and magnesium.

Similarly, Well # 29 fractured to Well # 32 or in an approximate north-south direction rather than the anticipated preferred direction of east and west. The original target for Well # 29 was Well # 34 located some 490 feet to the west. Well # 32 was located 810 feet to the south of Well # 29. Again, a high pressure connection between the two wells was established quickly. The brine produced had approximately the same chemical composition as that developed by the fracture between Well # 33 and Well # 34.

All four of these wells were finally abandoned as fractured galleries. A modified Trump-type single well was developed. At this point the brine produced quickly began to improve with respect to its chemical composition, gradually assuming the characteristics of a high purity brine. This conversion required that the main string of casing be perforated near the top of the cavity; a hook-wall packer on a string of casing be set below these perforations and above the end of the casing and that water be circulated down the annulus and back up the tubing.

In view of this unexpected development, our first step was to reëvaluate our geological data. Gradually, there emerged a theory of a double system of faults which controlled the direction of flow of our fracturing fluid. A careful study of our gamma-neutron logs which we had developed previously in Well # 27 and Well # 28, disclosed the # 4 Rock which underlies the 4th Salt, Fig. 7, repeats itself. The gamma-neutron logs from Well # 30 and Well # 31 demonstrated that the # 3 Rock repeated itself. The repetition of rock sequences was not found in any of the wells north of a line between Well # 30 and Well # 27, although there was a material thickening of the 1st Salt in Well # 34. This repetition of beds indicated faulting. The diastrophism which has occurred in this area was probably due to the tectonic force which created the Appalachian Uplift.

Two of our older facilities were relegated to storage of propane. These, two well galleries, were replaced by similar installations, the construction of which was started in October 1963. Based on the geology developed up to that point, we adhered to an east-west line. This was partially due to our geological findings, Fig. 8, and partially to our previous successful fracturing in an east-west direction in this southern portion of the field. Well # 35 was used as an injection

NYSDEC OHMS Document No. 201166576-00038

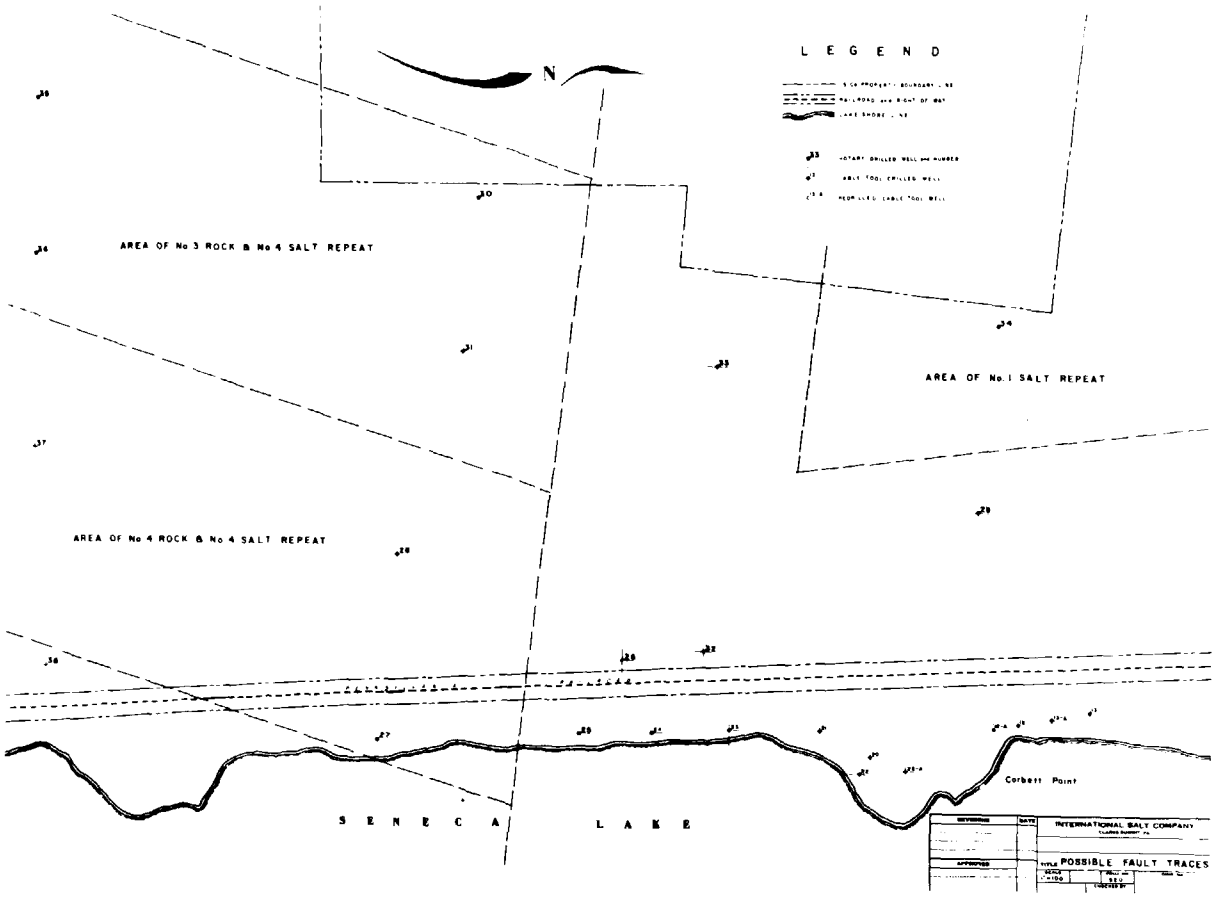


Figure 7

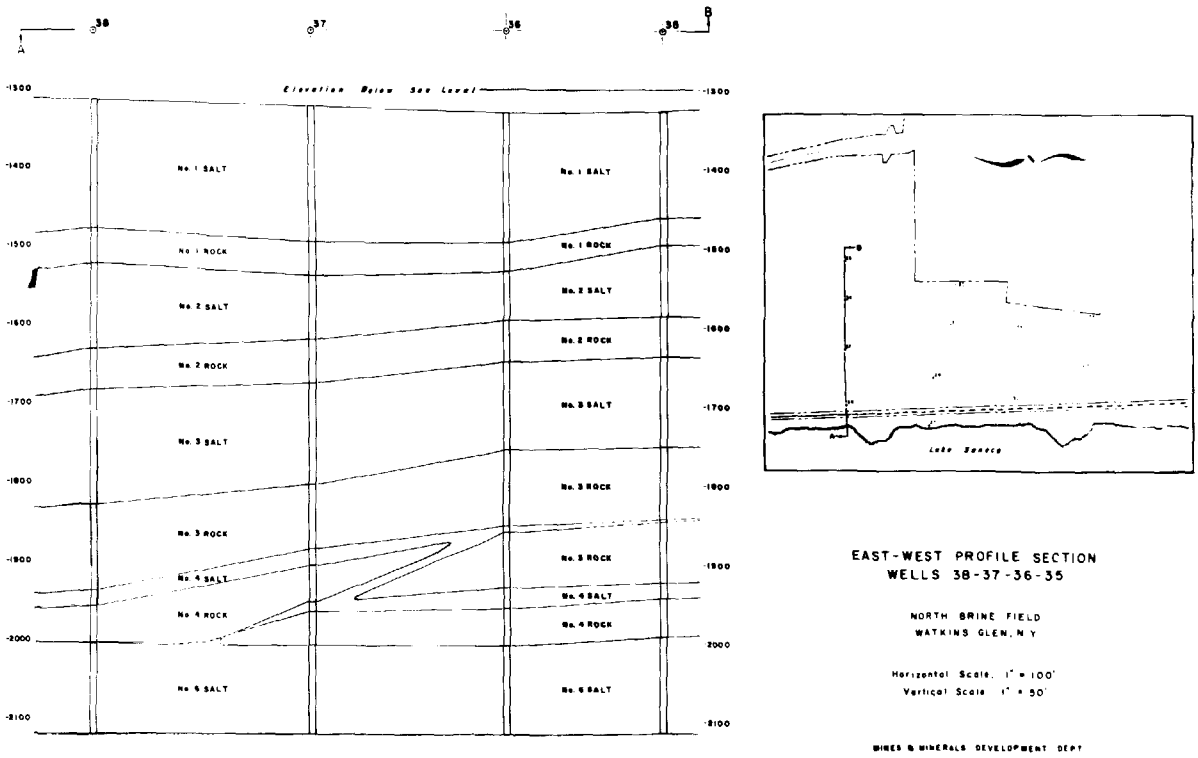


Figure 8

NYSDEC OHMS Document No. 201166576-00038

well with Well # 36 forming the target well. This was designed to form a gallery 410 feet in length. The second new gallery, Well # 37 and Well # 38 were spaced 550 feet apart with Well # 37 forming the injection well. The gallery formed by # 35 and Well # 36, together with the one formed by Well # 37 and Well # 38, were both fractured, connected and washed down to less than 100 p. s. i. in less than 24 hours.

CONCLUSIONS

From the field results we have experienced, we may conclude that an accurate interpretation of the local geology will eliminate a majority of the difficulties that we have encountered during our fracturing operations. These results also point up a number of facets of the geology at Watkins Glen which are not thoroughly resolved.

It is our opinion that except on a hit-or-miss basis, your results experienced during hydraulic fracturing are only as good as your geology is accurate.

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 4

NYSDEC OHMS Document No. 201166576-00038

Appalachian Foreland Thrusting in Salina Salt, Watkins Glen, New York

C. H. Jacoby
L. F. Dellwig
International Salt Company
Clarks Summit, Pennsylvania and
University of Kansas
Lawrence, Kansas

ABSTRACT

The Watkins Glen area lies along the western edge, and at the northern termination of mapped Allegheny Plateau folding. Surface mapping of the Devonian strata identified a series of northeast-southwest trending open folds. Studies to the northeast of the brine field in the mine of the Cayuga Rock Salt Company at Myers, New York resulted in the identification of a decollement beneath the mine-salt section, the faulting and folding being easily correlated with the major surface structure. In the Watkins Glen brine field a major north-south strike-slip fault extends down at least to a bedding (step) thrust along which the block to the west of the tear fault has moved north a minimum of 1200' in the southern portion of the brine field. As the thrust breaks up into the upper portion of the section to the north, the fault divides into several faults each of which compensates for a portion of the total displacement along the single thrust to the south. Additional faulting on a small scale as well as minor folding are recorded in nearly all wells, but correlation of these is not possible.

INTRODUCTION

The Watkins Glen area lies along the northwestern edge, and near the northeastern termination of mapped Allegheny Plateau folding (Figure 1). Surface mapping of the Devonian strata in 1909 (Williams, Tarr, and Kindle) defined a series of east-northeast trending open folds, prominent among which is the Firtree Point anticline. Until 1955 most geologists considered such broad open folds of the Appalachian Plateau (Allegheny Plateau of the Watkins Glen area) as deep structures which persisted into the underlying Paleozoic sequence of rocks. Although this view prevailed for the plateau in general, the Cumberland Block marginal to the thrust faulted Valley and Ridge Province in the Southern Appalachians was documented as early as 1934 (Rich, 1934) overlying a bedding thrust (Pine Mountain). Subsequent study (Wilson and Stearns, 1958) resulted in the identification of a similar thrust to the south and west of the Sequatchie anticline.

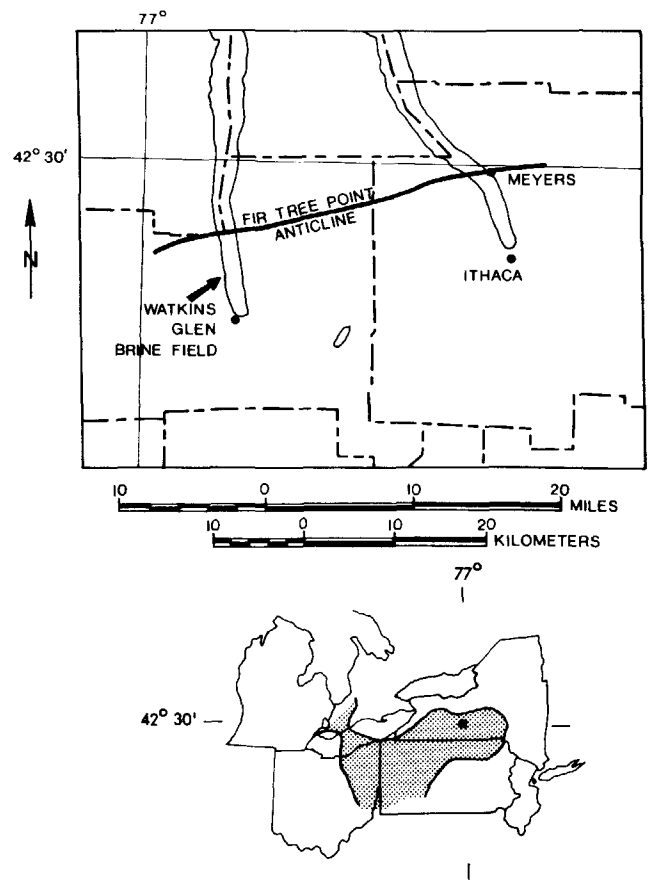


Figure 1. Index map, Watkins Glen, New York area.

Although bedding thrusts were accepted for the Cumberland Plateau of the Southern Appalachians, no such

NYSDEC OHMS Document No. 201166576-00038

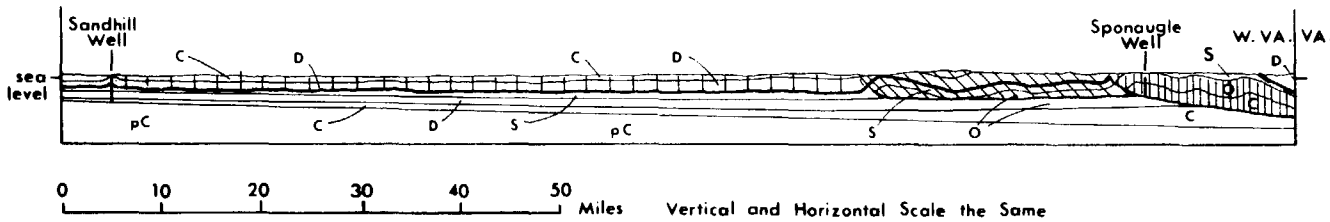


Figure 2. Theoretical cross section of Appalachian Plateau province in West Virginia (along line A-A', Figure 5) to illustrate the decollement hypothesis for folding. Vertical and diagonal lines indicate possible extend of decollements, as in Figure 5. Letter symbols: C—Carboniferous (including Permian); D—Devonian (heavy line = Lower Devonian); S—Silurian; O—Ordovician; C—Cambrian; pC—Precambrian (Rodgers, 1959).

structures were identified or even considered a probability in the Allegheny Plateau adjacent to the Central Appalachians. This in part might be attributed to the domination of the deformation of the adjacent Valley and Ridge Province by folding rather than by faulting. However, with the drilling of the Sandhill Well, in Wood County, West Virginia in 1955, there began the development of the concept of northwestward sliding of the near horizontal strata which overlie the viscoplastic Silurian salt on the Plateau (Figure 2), (Rogers, 1959). This concept has since been documented in several additional areas as a result of renewed subsurface exploration on the Plateau.

Although by 1955, the regional picture of the decollement tectonics in the Allegheny Plateau was well established, little was known about the details of movement in and above the lubricating Salina salt. In 1955 Jacoby obtained the first salt core recovered in the Watkins Glen area and a year later secured a similar Watkins Glen area core from Well 25 (Figure 3) which cut only the F3 and F2 salts. Partially due to the intense deformation and flowage which had been observed in the F1 salt in the Cayuga mine at Meyers, New York, the faulting in the Watkins Glen-Ludlowville area went uninterpreted.

With the drilling of Well 29 at Watkins Glen in 1958, core logs and gamma ray curves gave the first discernible evidence that thrust faulting had occurred. Coring and logging of additional wells led to the establishment of the first cross section of the Salina in this area in 1961 (Jacoby, 1963, 1969).

Prucha (1968) in 1964 conducted a study in the mine of the Cayuga Rock Salt Company at Meyers, New York which resulted in the identification of the decollement beneath the mine salt section, the faulting and folding being easily correlated with the major surface structure. In his analysis of deformation he predicts that southward the surface of detachment would pass into a thrust fault. In 1967, Dellwig undertook a comprehensive study of the structural aspects of the Watkins Glen brine field, utilizing additional cores and gamma logs made available by the drilling of Wells 39, 40, 41 and 42 in 1964. In 1968 this study was further expanded by utilizing logs from the newly drilled Wells 43 and 44 and again in 1972 with data from Wells 47, 48, 49, 50, 51 and 52.

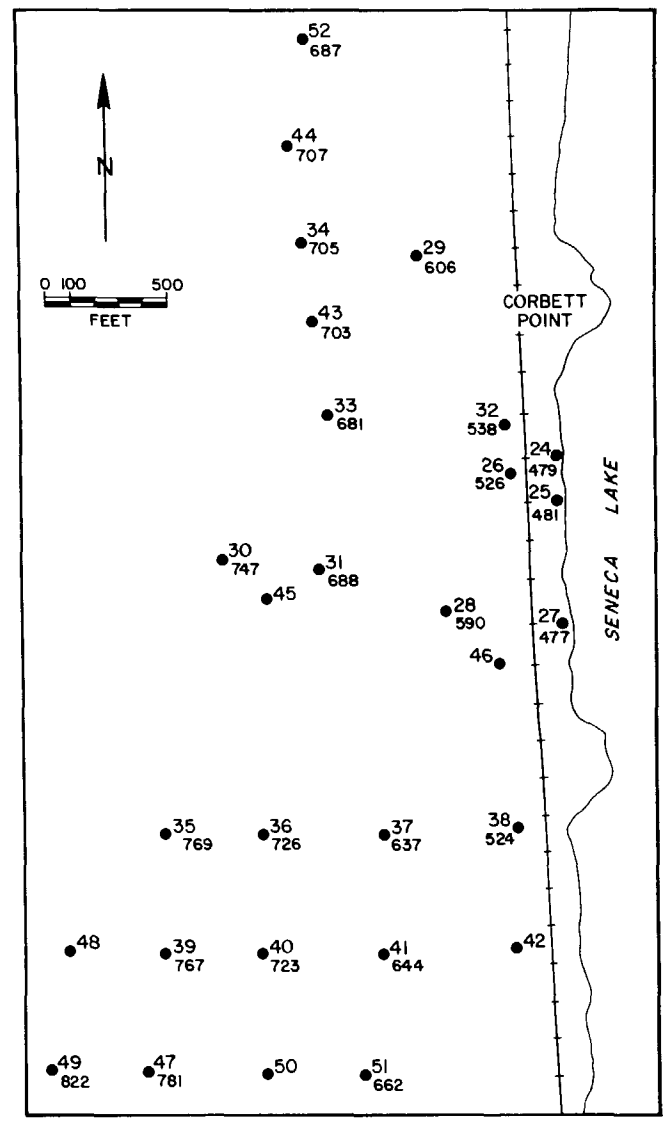


Figure 3. Index map, Watkins Glen, New York, brine field, International Salt Company. Upper number of each pair is well number, lower is surface elevation (where known).

NYSDEC OHMS Document No. 201166576-00038

BRINE FIELD

The first salt well was drilled in Watkins Glen at Salt Point in February 1893. This and the subsequent wells were located in and around International Salt Company's evaporator plant in the development of what is now termed the "South Field." These wells used the system known as "Annular Injection" in which water is pumped down the annulus formed by the casing and the tubing of the well and the brine is recovered through the tubing. Due to the folk-lore belief of the cable tool drillers as to the location of bottom of the salt formation, plus the presence of a 4 to 6 ft. layer of anhydrite within the F3 salt sequence which blankets the Watkins Glen area, wells were terminated after penetrating 90 ft. of the F3 salt.

Wells drilled during these early years were drilled as single wells equipped with a string of swaged two diameter wrought iron casing, some type of pumping device and tubing. The wrought iron casing was not cemented in place and occasionally was galvanized or wrapped to prevent its corrosion by the Oriskany or Cherry Valley "black water." The original air lifts which were installed in the wells were made necessary by the lack of the seal behind the casing which would have isolated the brining fluids from the overlying formational fluids. This air lift system gave way to modernization by the installation of submersible pumps and tubing. Gradually, during brining operations, all of these old style wells which had formed a morning glory-shaped cavity, coalesced with adjacent wells at the contact between the top of the F3 salt and the overlying shale. Due to the broad roof spans which were developed, there was apprehension of damage to the surface by rock movement. Brining operations in the vicinity of the plant were discontinued with the closing down of Wells 4 and 7A in 1960.

With the drilling of Well 25 in 1955, not only was the first accurate subsurface geological data obtained in the Watkins Glen area, but a rotary oil field rig was utilized for the first time for the drilling of a salt well in the state of New York. Additionally, this was the first salt well in the state of New York to be hydraulically fractured. This new style of salt well was fractured at the bottom of the salt sequences which was by then (1955) known to have a total aggregate thickness of over 500 feet. Generally, these wells were drilled with a 12-1/4 in. bit equipped with a string of 8-5/8 in. steel casing and cemented back to surface. This cementing not only allowed a pair of fracture connected wells to operate on pressurized U tube system, but it also protected the casing against the corrosional black waters of the formations penetrated by the well. Fracturing of the salt formations was accomplished either by perforating the casing at a pre-selected point in the salt just above the Vernon shale or "landing" the casing just above this point, drilling out and applying the pressure to the formation exposed to the well bore.

All subsequent wells were cored and electrically logged in order to clarify an understanding of the local geology, interpret the results of hydraulic fracturing and extrapolate these findings for the location of other salt wells. As development proceeded with respect to fracturing and brining operations, it became obvious that more care was required in the interpretation of the geological data.

STRATIGRAPHY

The salt sequence of the Syracuse Formation penetrated by the brine wells at Watkins Glen consists of an interbedded sequence of salt, dolomite and shale, ranging in thickness from north to south from 725 ft. (a true thickness with no duplication through thrusting) to 800 ft. The base of the sequence there is found to depths of 2900 ft. (at an elevation of –2100 ft.) as compared with a depth of –1880 ft. at the Cayuga Rock Salt Company mine. Based on subsurface log data, the base of the sequence strikes N. 78° E. and dips 185-190 ft./mi. to the south.

In the definition of stratigraphic units in the wells in the Watkins Glen brine field, both the classification used in early logging and that of Landes (1945) are indicated. The uppermost identifiable salt of the sequence was originally defined as the No. 1 Salt (F3 Salt) and the rock unit immediately below the No. 1 Rock. On this basis six salt and 5 intervening rock units were originally defined, units were easily recognized by the gamma ray log signature (Figures 4,5). Several stratigraphic logs show some digres-

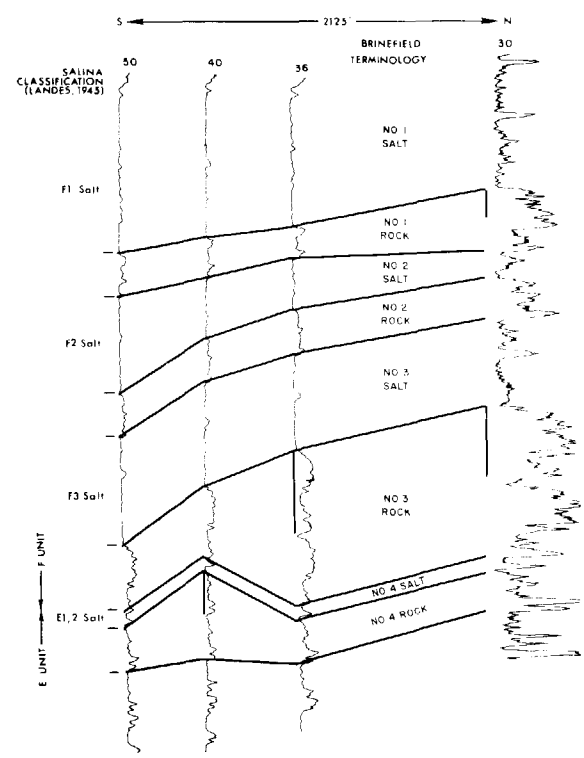


Figure 4. North-south section correlating on gamma ray logs, No. 1 Salt to No. 4 Rock. Thick vertical lines delimit repeated section.

NYSDEC OHMS Document No. 201166576-00038

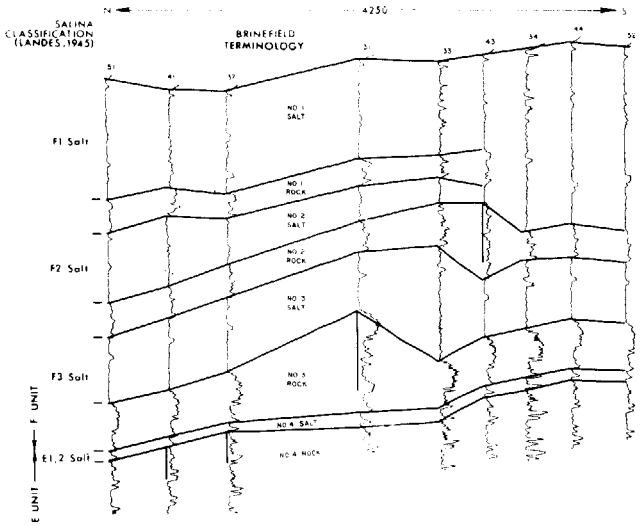


Figure 5. North-south section correlating on gamma ray logs, No. 1 Salt to No. 4 Rock. Thick vertical lines delimit repeated section.

sion from the normal classification and these were revised to fit the normal sequence. At the northern end of the field, correlation of No. 4 Salt, No. 6 Salt and No. 4 Rock can be accomplished with little difficulty, whereas in the south end of the field, repetition of the lower units is common but correlation can be accomplished with relative ease in rock and salt units 1, 2 and 3. Repetition of rock units is generally easily identifiable, for the gamma ray-neutron log "signature" of each individual unit is unique (Figure 6). Repetition within a salt unit is more difficult to recognize because of the lack of a characteristic signature.

STRUCTURE

In gross aspect the local structural picture is relatively simple, provided of course, that one ignores the multiplicity of small faults which play a critical role in the development of the brine field. A major north-south strike-slip fault is located east of Wells 41, 37 and 29; a tear which extends down at least to a bedding (step) thrust along which the block to the west of the tear fault has moved north a minimum of 1,200 ft. in the southern portion of the brine field. This estimate is based on the repetition of the No. 3 Rock in Wells 36 and 30 (Figure 4), the distance between these wells being approximately 1,200 ft. The north-south section through Wells 37 and 31 (Figure 5) shows good correlation of No. 3 Rock, duplication between 30 and 31, but to the south in Well 37 the repeated section is in No. 4 Rock, indicating some tearing between Wells 36 and 37. This condition is not uncommon throughout the brine field. The major tear has been defined by a consistent lack of correlation between wells across this line (Figure 7). As the thrust breaks up into the upper portion of the section to the north, the fault divides

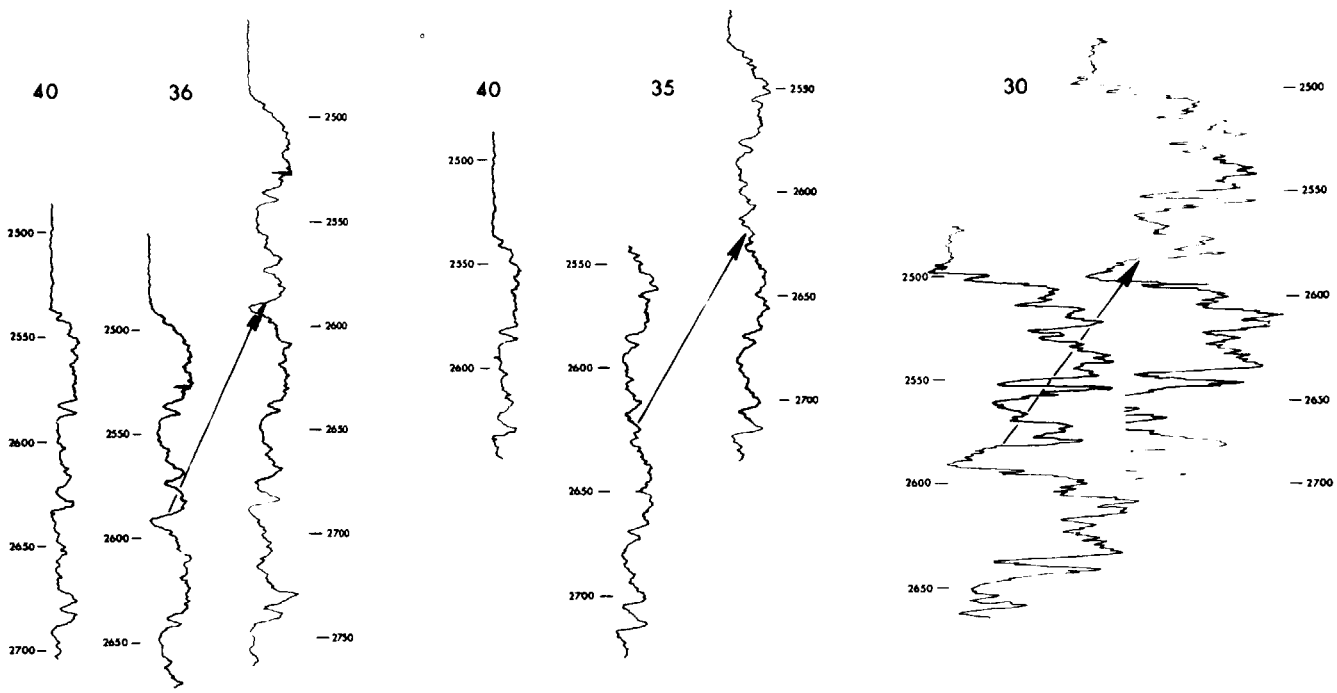


Figure 6. Sample correlations in faulted sections. *Left*—Gamma-ray log for Well 40 is normal, correlation at top of rock unit with Well 36 is shown in center log, correlation at base is effected through movement into position on right. *Center*—Log for Well 40 is normal. Correlation with top of log 35 is shown in center log. Correlation with base of rock unit is effected through movement into position on right. *Right*—Duplication of section is demonstrated through movement of log as shown by arrow, numbers are logging depth, *not* elevations.

NYSDEC OHMS Document No. 201166576-00038

into several faults each of which compensates for a portion of the total displacement along the single thrust to the south. These movements, along with flowage in the incompetent salt units, collectively accommodate the movement along the single fault to the south. Additional faulting on a small scale as well as minor folding are recorded in nearly all wells, but correlation of these is not possible. East of the tear fault, thrusting is on a small scale and displacement is negligible. The absence of significant repetition through thrusting east of the tear fault has been used to establish the position of the fault.

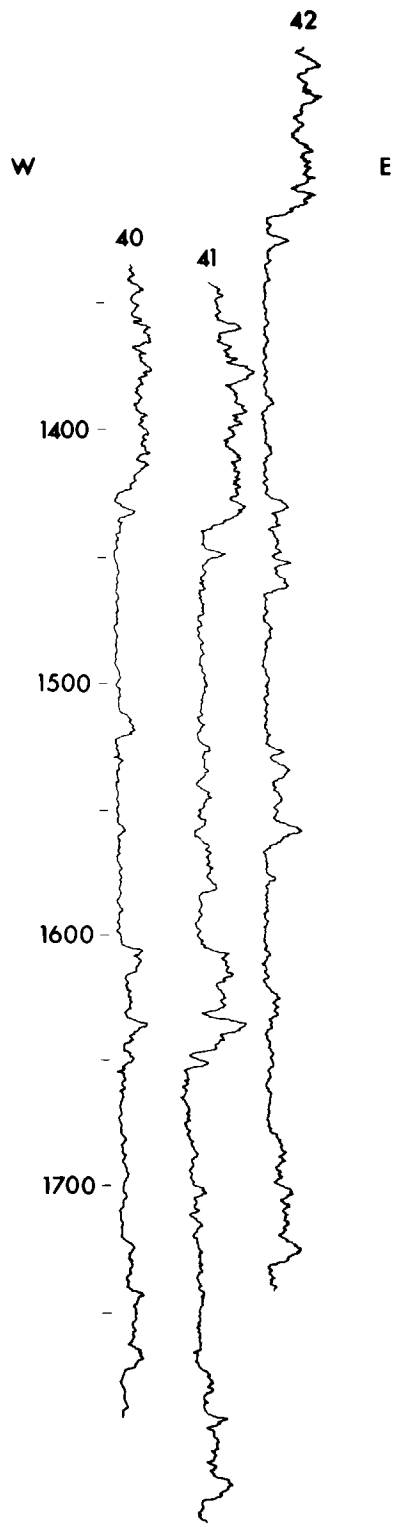


Figure 7. Offset across tear fold is marked by offset between Wells 41 and 42. All logs plotted relative to sea level datum as shown on left.

The major thrust in the western half of the brine field is identifiable through repetition of beds in the lower portion of the section at the south end of the field. Thrusting apparently has occurred in shale beds or along salt-shale contacts. At irregular intervals the thrust breaks into and across the overlying rock and salt to the next higher lubricating shale layer along which movement can continue. As the fault breaks across the No. 3 Rock into the overlying salt, the angle of dip of the fault plane increases and the fault horsetails. Some thickening and locally high dips in the beds indicate that flowage has also compensated for some of the displacement which appears to have been along the single fault surface to the south. The structure contour map on the top of the salt gives no indication of the faults breaking up into the overlying sediments. It would seem reasonable to assume that to the south the fault drops down into the underlying Vernon Shale.

Structure contour and isopach maps reveal that both the upper and lower surfaces of the salt are relatively uniform; the lower surface shows a regional southerly dip and the upper surface shows a pronounced dip to the west as a result of a general southeasterly thickening of the salt unit. However, thickening to the southeast is contrary to expectations, because thickening through faulting has occurred west of a north-south tear fault east of Wells, 41, 37, and 29 and west of Well 28. Repetition of units east of this line has been minor.

In addition to the faulting described, it is noted in lithologic logs that slickenslides at the top of the No. 3 Rock are apparently common to all wells. In general the section downward from the top of the No. 3 Rock is dominated by clastics, whereas the section above the No. 3 Rock is predominantly salt. The movement of the upper more plastic section over the underlying more rigid section would be anticipated and apparently has occurred, but the extent of movement cannot be determined. In the northern portion of the field, to accommodate slippage along this contact, the major strike-slip fault may extend down below the thrust fault to the top of the No. 3 Rock.

In detail the picture is much more complex. Numerous small faults resulting in repetition of section and identifiable in only a single or several wells are found throughout the field. Variations in thickness of salt units though flowage and/or faulting (inseparable because of the lack of a characteristic log signature) is also not uncommon and this, combined with the faulting presents a complex pattern of minor displacements superimposed on a general

NYSDEC OHMS Document No. 201166576-00038

south dipping decollement broken by a major north-south tear, the terminal expression of the total movement finding surface manifestation in the Firtree Point anticline.

STRUCTURAL CONTROL OF BRINEFIELD DEVELOPMENT

It should thus be expected that difficulties in production arising from the geologic environment should be encountered and explainable to at least some degree in the light of the structural setting. For example,

Well 29. During fracturing, a flow of brine at the surface 0.5 mi. to the north must certainly be interpreted as the result of movement of brine from the well along the tear fault.

Well 33, 34, 43. In fracturing of Well 33 to 34, alternate buildup and recession of pumping pressures indicated that the solution channel was being closed by rock movement from time to time. In the light of subsequent geologic information, the occurrence of intermittent collapse should not have been unexpected, inasmuch as in this area of the brine field the major thrust has broken up, into and through the No. 3 Salt. Faulting above the cavity created by solution between Wells 33 and 34 may have resulted in a weakness which led to the observed periodic collapse and pressure buildup. It is over this area that the major thrust bifurcates at several different points, creating a series of planes of weakness in the section overlying the solution zone.

Wells 41, 42, and 37. The inability to fracture from Well 41 to 42 and the subsequent connection between 41 and 37 may be related to the position of the tear fault. One might postulate that movement of solution from Well 37 may have been blocked to some degree by the tear fault (if it extends below the thrust) but, even if this were not the case, movement of fluid along the tear fault or up dip along the thrust would be with a much greater degree of ease than across the tear fault into Well 42. However, an effort to fracture from Well 40 to Well 39 resulted in connection with Well 42; no connection was made with 41, this demonstrating the complexity of the structural setting in this area.

SENECA LAKE SALT ANTICLINE

The total salt-rock sequence shows a constant increase in thickness in a west to east direction (Figure 8). As mentioned previously, the base of the salt shows a consistent dip to the south, whereas the top of the sequence expresses the increase through a dip to the west.

Seneca Lake stands a 445 ft. above sea level and bottoms at 174 ft. below sea level. Northward projection of data obtained through drilling south of the lake in glacial valley-fill suggests that the lake is bottomed with approximately 600 ft. of gravel, thus, the estimated elevation of

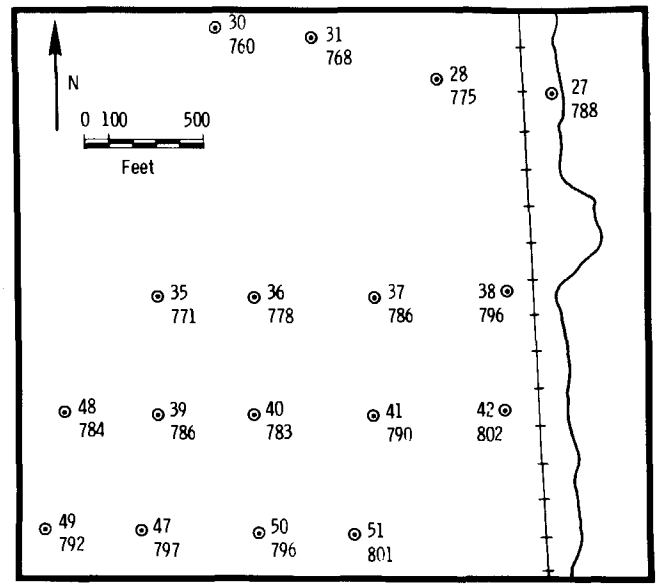


Figure 8. Southern half, Watkins Glen brine field showing well designations (upper figure of each pair) and total salt thickness (lower figure of each pair).

the bedrock surface at the bottom of the lake is approximately –775 ft. The top of the salt section in Wells 24, 25, and 27 next to the lake is at an elevation between 1305 ft. and 1315 ft. Westward from the lake in the brine field area the ground elevation rises to approximately 300 ft. above lake level. Thus the salt in the brine field is loaded with approximately 2,000 ft. of rock compared with the salt beneath the lake which is loaded with the equivalent (assuming a porosity of 30 per cent for gravel and an average rock density of 2.7) of 1300 ft. of rock. In the present atmosphere of geofantasy one cannot help but postulate that the higher elevation of the upper salt surface to the east toward the lake is in large part due to flowage of the salt toward the area of least overburden beneath Seneca Lake and there is the possibility of the existence of a salt structure province in west central New York.

REFERENCES

Jacoby, C. H., 1963, International Salt Brine Field at Watkins Glen, New York, in Bersticker, A. C., (ed), *Symposium on Salt,* Northern Ohio Geol. Soc., Inc., Cleveland, Ohio, 506–520.

Jacoby, C. H., 1969, Correlation, Faulting and Metamorphism of Michigan and Appalachian Basin Salts, *Am. Assoc. Petrol. Geol. Bull.,* 53:136–154.

King, P. B., 1951, *The Tectonics of Middle North America,* Princeton University Press, 203 pp.

Landes, K. K., 1945, The Salina and Bass Island Rocks in the Michigan Basin, *U.S. Geol. Survey Oil and Gas Inv., Prelim. Map* 40.

NYSDEC OHMS Document No. 201166576-00038

Prucha, J. J., 1968. Salt Deformation and Decollement in the Firtree Point Anticline of Central New York, *Tectonophysics*, 6, no. 4:273–299.

Rich, J. L., 1934, Mechanics of Low-Angle Overthrust Faulting as Illustrated by Cumberland Thrust Block, Virginia, Kentucky, and Tennessee," *Am. Assoc. Petrol. Geol. Bull.*, 18:1584–1596.

Rodgers, J., 1959. Evolution of Thought on Structure of Middle and Southern Appalachians, *Am. Assoc. Petrol. Geol. Bull.*, 33:1643–1654.

Vanuxem, L., 1842, Geology of New York, 3. Survey of the Third Geological District. N.Y. State Assembly, Albany, New York, 307 pp.

Williams, H. S., R. S. Tarr, and E. M. Kindle, 1909, Description of the Watkins Glen-Catatonk District, *U.S. Geological Survey Atlas, Folio* 169.

Wilson, C. W., Jr., and R. G. Stearns, 1958, Structure of the Cumberland Plateau, Tennessee, *Geol. Soc. America Bull.*, 69:1283–1296.

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 5

NYSDEC OHMS Document No. 201166576-00038

Resolution No. 46
SCHUYLER COUNTY LEGISLATURE

February 10, 2015 Regular Meeting – Tabled
April 13, 2015 Regular Meeting- Adopted

Intro. No. ____
Approved by Committee SFF
Approved by Co. Atty. GBR

Motion by Barnes
Seconded by Harp
Vote: 7 Ayes to 0 Noes
Name of Noes_____

RE: ADOPT SCHUYLER COUNTY COMPREHENSIVE EMERGENCY MANAGEMENT PLAN - SCHUYLER COUNTY EMERGENCY MANAGEMENT

WHEREAS, the Comprehensive Emergency Management Plan (CEMP) for Schuyler County has been revised by the Emergency Management office, and

WHEREAS, ESF 1: Appendix 1, Schuyler County Transportation and Emergency Evacuation Plan, has been completed and added to the CEMP, and

WHEREAS, Annex 8 Schuyler County Hazardous Materials Incident Response Plan has been updated, and

WHEREAS, the Schuyler County Legislature recognizes that a comprehensive plan is needed to enhance the County's ability to manage emergency/disaster situations that are a threat to the County and community.

NOW, THEREFORE BE IT RESOLVED, that the Schuyler County Legislature does hereby adopt the Comprehensive Emergency Management Plan (CEMP), under the authority Article 2-B Section 23 of the New York State Executive Law, a County is authorized to develop a Comprehensive Emergency Management Plan to prevent, mitigate, respond to and recover from emergencies and disasters, and

BE IT FURTHER RESOVLED, that said revised plan takes effect immediately.

STATE OF NEW YORK)
) SS:
COUNTY OF SCHUYLER)

I, Jamee L. Mack, Deputy Clerk of the Schuyler County Legislature, do hereby certify that the foregoing is a true and exact copy of resolution duly adopted by the County Legislature on April 13, 2015.

IN TESTIMONY WHEREOF, I have hereunto set my hand and the seal of said County Legislature at Watkins Glen, NY.

Jamee L. Mack
Jamee L. Mack, Deputy Clerk

4-16-15
Date

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 6

NYSDEC OHMS Document No. 201166576-00038

SCHUYLER COUNTY

COMPREHENSIVE EMERGENCY MANAGEMENT PLAN

Draft

Revised 2014

Adopted 4/12015

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Table of Contents

Executive Summary 1

Section I: General Considerations and Planning Guidelines 3

A. Policy Regarding Comprehensive Emergency Management 3

B. Purpose and Objectives of the Plan 4

C. Legal Authority 4

D. Concept of Operations 4

E. Plan Maintenance and Updating 5

Section II: Preparedness 7

A. Identification and Analysis of Potential Hazards 7

B. Risk Reduction Policies, Programs and Reports 7

C. Emergency Response Capability Assessment 8

D. Training of Emergency Personnel 8

E. Public Education and Awareness 9

Section III: Response 13

Response Organization and Assignment of Responsibilities 13

A. Chairman, Board of Legislature Responsibilities, Powers, and Succession 13

B. The Role of the Emergency Manager 13

C. The County Emergency Response Organization 14

Managing Emergency Response 15

A. Incident Command Post and Emergency Operations Center 15

B. Notification and Activation 18

C. Assessment and Evaluation 18

D. Declaration of Local State of Emergency and Promulgation of Local Emergency Orders 19

NYSDEC OHMS Document No. 201166576-00038

E. Public Warning and Emergency Information 19

F. Emergency Medical and Public Health....20

G. Meeting Human Needs 20

H. Restoring Public Services....21

I. Resource Management 21

J. Standard Operating Guides and other supporting plans 22

Section IV- Recovery 25

A. Damage Assessment 25

B. Planning for Recovery....28

C. Reconstruction....29

D. Public Information on Recovery Assistance 30

Section V: Mitigation....31

A. Designation of County Hazard Mitigation Coordinator 31

B. Mitigation Policies and Programs 31

C. Monitoring of Identified Hazard Areas....32

Section VI: Glossary....33

Revision Records 36

CEMP Distributions List 38

Contact Information

Forms

NYSDEC OHMS Document No. 201166576-00038

Appendix 1 – ESF 1 - Transportation/ Evacuation Plan

Annex 1- NIMS Incident Command System Position Descriptions

Annex 2- Standard Operating Guide for the Schuyler County Emergency Operations Center (EOC)

Annex 3 - Instructions for Declaring a State of Emergency and Issuing Emergency Orders

Annex 4 – Schuyler County Emergency Alert System (EAS)

Annex 5 – TBD

Annex 6 – Schuyler County Mass Casualty Incident Plan

Annex 7 – Schuyler County Mass Fatality Plan

Annex 8 – Schuyler County Hazardous Materials Incident Response Plan

Annex 9 – Schuyler County Animal Emergency Response Plan

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Executive Summary

Introduction

This plan results from the recognition on the part of local government and State officials that a comprehensive plan is needed to enhance the County's ability to manage emergency/disaster situations. It was prepared by County officials working as a team in a planning process recommended by the New York State Office of Emergency Management. This plan constitutes an integral part of a statewide emergency management program and contributes to its effectiveness. Authority to undertake this effort is provided by both Article 2-B of State Executive Law and New York State Defense Emergency Act.

The development of this plan included an analysis of potential hazards that could affect the county and an assessment of the capabilities existing in the county to deal with potential hazards.

Comprehensive Approach

Dealing with disasters is an ongoing and complex undertaking. Through implementation of preparedness and mitigation measures before a disaster or emergency occurs, timely and effective response during an actual occurrence, and provision of both short and long term recovery assistance after the occurrence of a disaster, lives can be saved and property damage minimized.

This process is called Comprehensive Emergency Management to emphasize the interrelationship of activities, functions, and expertise necessary to deal with emergencies. The plan contains four sections to deal separately with each part of this ongoing process.

Management Responsibilities

County departments' and agencies' emergency management responsibilities are outlined in this plan. Assignments are made within the framework of the present County capability and existing organizational responsibilities. The Schuyler County Emergency Management Office is designated to coordinate all emergency management activities of the County.

Schuyler County intends to use the National Incident Management System (NIMS) & Incident Command System (ICS) to respond to emergencies. ICS is a management tool for the command, control, and coordination of resources and personnel in an emergency.

County responsibilities are closely related to the responsibility of the local levels of government within the County (towns and villages) to manage all phases of an emergency. The County has the responsibility to assist the local governments in the event that they have fully committed their resources and are still unable to cope with any disaster. Similarly, New York State is obligated to provide assistance to the County after resources have been fully committed and the County is unable to cope with the disaster.

The plan describes in detail the centralized direction of requests for assistance and the understanding that the governmental jurisdiction most affected by an emergency is required to fully involve itself in the emergency prior to requesting assistance.

NYSDEC OHMS Document No. 201166576-00038

Specific emergency management guidance for situations requiring special knowledge, technical expertise, and resources may be addressed in separate annexes attached to the plan. Examples of this type of situation are emergencies resulting from hazardous chemical releases, dam failures, or power outages.

Conclusion

The plan provides a general, all-hazards management guidance, using existing organizations, to allow the County to meet its responsibilities before, during and after an emergency.

Do to circumstances and complexity of a developing emergency/disaster situations, it may require deviation from the plan to meet the overall objective of the plan.

NYSDEC OHMS Document No. 201166576-00038

Section I: General Considerations and Planning Guidelines

A. Policy Regarding Comprehensive Emergency Management

1. A wide variety of emergencies, caused by nature or technology, result in loss of life, property and income, disrupt the normal functions of government, communities and families, and cause human suffering.
2. County government must provide leadership and direction to prevent, mitigate, respond to, and recover from dangers and problems arising from emergencies in Schuyler County.
3. Under authority of Section 23 of the New York State Executive Law, a county is authorized to develop a comprehensive emergency management plan (CEMP) to prevent, mitigate, respond to and recover from emergencies and disasters. To meet this responsibility, Schuyler County has developed this CEMP, which may also be referenced to as Plan in this document.
4. This concept of Comprehensive Emergency Management includes four phases:
   a) Preparedness
   b) Response
   c) Recovery
   d) Mitigation
5. Preparedness:
   a) Preparedness refers to a continuous cycle of planning, organizing, training, equipping, exercising and evaluating, and taking correction action in an effort to ensure effective coordination during incident response.
6. Response
   a) Response operations may start before the emergency materializes, for example, on receipt of advisories that a flood, blizzard, or ice storm is approaching. This increased readiness response phase may include such pre-impact operations as:
      i) Detecting, monitoring, and assessment of the hazard
      ii) Alerting and warning of endangered populations
      iii) Protective actions for the public
      iv) Allocating/distributing of equipment/resources
   b) Most response activities follow the immediate impact of an emergency. Generally, they are designed to minimize casualties and protect property to the extent possible through emergency assistance. They seek to reduce the probability of secondary damage and speed recovery operations.
   c) Response operations in the affected area are the responsibility of and controlled by the local municipalities, supported by the county emergency operations as appropriate.
   d) If a municipality is unable to adequately respond, County response operations may be asked to assume a leadership role.

NYSDEC OHMS Document No. 201166576-00038

7. Recovery
   a) Recovery activities are those following a disaster to restore the community to its pre-emergency state, to correct adverse conditions that may have led to the damage, and to protect and improve the quality of life in the community. It includes risk reduction actions to prevent or mitigate a recurrence of the emergency.
8. Mitigation
   a) Mitigation refers to all activities which aim to reduce the loss of life and property from disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities.

B. Purpose and Objectives of the Plan

1. This Plan sets forth the basic guidance for managing emergencies in Schuyler County:
2. The objectives of the Plan are:
   a) To identify, assess and prioritize local and regional vulnerabilities to emergencies or disasters and the resources available to prevent or mitigate, respond to, and recover from them.
   b) To outline short, medium and long range measures to improve the County's capability to manage hazards.
   c) To provide that County and local governments will take appropriate actions to prevent or mitigate effects of hazards and be prepared to respond to and recover from them when an emergency or disaster occurs.
   d) To provide for the efficient utilization of all available resources during an emergency.
   e) To provide for the utilization and coordination of local government, State and Federal programs to assist disaster victims, and to prioritize the response to the needs of the elderly, disabled, low income, and other groups which may be inordinately affected.
   f) Provide for the utilization and coordination of State and Federal programs for recovery from a disaster with attention to the development of mitigative programs.

C. Legal Authority

This Plan, in whole or in part, may rely upon the following laws for the power necessary for its development and implementation.

1. New York State Executive Law, Article 2-B
2. New York State Defense Emergency Act, as amended
3. Federal Robert T. Stafford Disaster Relief and Emergency Assistance Act

D. Concept of Operations

1. The primary responsibility for responding to emergencies rests with the local governments of towns and villages and with their Chief Elected Official.
2. Local governments and the emergency service organizations play an essential role as the first line of defense.
3. Responding to a disaster, local jurisdictions are required to utilize their own facilities, equipment, supplies, personnel and resources first.

NYSDEC OHMS Document No. 201166576-00038

4. The local Chief Elected Official has the authority to direct and coordinate disaster operations and may delegate this authority to a local coordinator.
5. When local resources are inadequate, the Chief Elected Official of a town or village may obtain assistance from other political subdivisions and the County government.
6. The Legislature Chairman may coordinate responses for requests for assistance from the local governments.
7. The Legislature Chairman has the authority to direct and coordinate County disaster operations.
8. The Legislature Chairman may obtain assistance from other counties or the State when the emergency disaster is beyond the resources of Schuyler County.
9. The County Legislature has assigned to the Emergency Management Office the responsibility to coordinate County emergency management activities.
10. Schuyler County will utilize the National Incident Management System (NIMS), Incident Command System (ICS) to manage all emergencies requiring multi-agency response. Schuyler County recommends and encourages all local governments in Schuyler County to utilize ICS.
11. A request for assistance to the State will be submitted through the Region V Finger Lakes Office of the New York State Office of Emergency Management (SOEM) located in Rochester, New York, and presupposes the utilization and expenditure of personnel and resources at the local level.
12. State assistance is supplemental to local emergency efforts.
13. Direction and control of State risk reduction, response and recovery actions is exercised by New York State Disaster Preparedness Commission (DPC), coordinated by the SOEM.
14. Upon the occurrence of an emergency or disaster clearly beyond the management capability and emergency resources of State and local governments, the Governor may find that Federal assistance is required and may request assistance from the President by requesting a declaration of a major disaster or emergency.

E. Plan Maintenance and Updating

1. The County Emergency Management Office shall be responsible for maintaining and updating this Plan.
2. All County departments and agencies are responsible for annual review of their emergency response role and procedures, and provide any changes to the Emergency Manager.
3. The Plan shall be reviewed and updated annually. Major changes to the plan shall be submitted to the New York State Office of Emergency Management for review as necessary.

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Section II: Preparedness

A. Identification and Analysis of Potential Hazards

1. The County Emergency Planning Committee shall be comprised of:

Schuyler County Emergency Manager	EMS Coordinator
County Hazard Mitigation Coordinator	Schuyler County Sheriff
Schuyler County Fire Coordinator	Schuyler County Highway Superintendent
Schuyler County Public Health	911 Coordinator
Schuyler County Administrator	

2. The County Emergency Planning Committee will:
   a) Should be trained in NIMS/ICS to a recommended minimum level per there position
   b) identify potential hazards in the County
   c) determine the probable impact each of those hazards could have on people and property
   d) delineate the geographic areas affected by potential hazards, and designate them as hazard areas

3. Significant potential hazards to be identified and analyzed include natural, technological, and human-caused hazards.

4. To comply with (2) and (3) above, hazards that pose a potential threat have been identified and analyzed by the Local Emergency Planning Committee using the program HAZNY, provided by the SOEM.

5. This hazard analysis:
   a) provides a basic method for analyzing and ranking the identified hazards, including identification of geographic areas and populations at risk to specific hazards
   b) establishes priorities for planning for those hazards receiving a high ranking of significance
   c) was conducted in accordance with guidance from the SOEM
   d) is to be reviewed and updated every three years

6. The rating and ranking results of the hazard analysis are found in Attachment I: Hazard Analysis Results for Schuyler County.

7. The complete Hazard Analysis results are located in the Schuyler County Emergency Management Office.

B. Risk Reduction Policies, Programs and Reports

1. County agencies are authorized to:
   a) promote policies, programs and activities to prepare for hazard risks in their area of responsibility
   b) Examples of the above are:

NYSDEC OHMS Document No. 201166576-00038

i) Work with Public Health to assist in plans for Isolation & Quarantine and for Pandemic Flu outbreak.
ii) encourage and participate in municipal emergency action plans

C. Emergency Response Capability Assessment

1. Periodic assessment of the County's capability to manage the emergencies that could be caused by the hazards identified in the County is a critical part of Risk Reduction.
2. The Emergency Planning Committee will:
   a) assess the county's current capability for dealing with those significant hazards that have been identified and analyzed, including but not limited to:
      i) the likely time of onset of the hazard
      ii) the impacted communities' preparedness levels
      iii) the existence of effective warning systems
      iv) the communities' means to respond to anticipated casualties and damage
3. To assist the Emergency Planning Committee in its assessment, the County Emergency Manager will conduct table-top exercises based upon specific hazards and hazard areas identified by the Committee.
4. The Committee will identify emergency response shortfalls and make recommendations for implementing corrective actions to the County Emergency Manager, County Chairman, local governments, and the SOEM Region V Office.

D. Training of Emergency Personnel

1. The Schuyler County Emergency Manager, has the responsibility to:
   a) arrange and provide, with the assistance of the SOEM, the conduct of training programs for County emergency response personnel, as designated by the County Emergency Manager
   b) encourage and support training for town and village emergency personnel response personnel, including volunteers
   c) such training programs will:
      i) include information on the characteristics of hazards and their consequences and the implementation of emergency response actions including protective measures, notification procedures, and available resources
      ii) include NIMS. and ICS training, focusing on individual roles
      iii) conduct meetings as needed, but no less than yearly, with appropriate personnel from local jurisdictions concerning disaster interface with county government, including NIMS & ICS for Executives training.
      iv) provide emergency personnel with the variety of skills necessary to help reduce or eliminate hazards and increase their effectiveness to respond to and recover from emergencies of all types
      v) be provided in crisis situations, that requires additional specialized training and refresher training
   d) conduct periodic exercises and drills to evaluate local capabilities and preparedness, including a full scale operational exercise that tests a major portion of the elements and responsibilities in

NYSDEC OHMS Document No. 201166576-00038

the Schuyler County Comprehensive Emergency Management Plan, and regular drills to test readiness of warning and communication equipment

e) consult with the county departments and agencies, in developing training courses and exercises
f) work with the local response community and education agencies to identify or develop, and implement, training programs specific to mitigation, response, and recovery from the identified hazards
g) receive technical guidance on latest techniques from State and Federal sources as appropriate and request assistance as needed

2. All county departments and agencies assigned emergency functions are responsible to develop an in-house training capability in order that departments and agencies further train their employees in their duties and procedures.

3. Volunteers participating in emergency services such as fire and rescue operations, ambulance services, first aid and other emergency medical services, Red Cross, Radio Amateur Civil Emergency Service(RACES), Civil Air Patrol (CAP), should be trained by these services in accordance with established procedures and standards.

E. Public Education and Awareness

1. The Director of Emergency Management Office is responsible for:

   a) Encouraging, supporting and coordinating educational outreach to Schuyler County residents
   b) making the public aware of existing hazards in their communities
   c) familiarizing the public with the kind of protective measures the county has developed to respond to any emergency arising from the hazard

2. This education shall:

   a) shall attempt to cover all significant hazards
   b) be available free of charge
   c) may be provided to existing school districts in the county through arrangements with the superintendent of schools, public health and emergency management officials.

3. Federal Emergency Management Agency (FEMA) pamphlets, books and kits dealing with all aspects of emergency management and materials developed by SOEM and other State departments, as appropriate, will be made available for use in the program.

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Attachment I: Hazard Analysis Results for Schuyler County

HAZNY tool provided by the NYS SOEM Office.

Hazard	Rating	Classification
Ice Storm	299	Moderately High Hazard
Winter Storm (Severe)	244	Moderately High Hazard
Extreme Temps	219	Moderately Low Hazard
Severe Storm	218	Moderately Low Hazard
Epidemic	212	Moderately Low Hazard
Power Failure	210	Moderately Low Hazard
Flood	202	Moderately Low Hazard
Terrorism	188	Moderately Low Hazard
Transportation Accident	188	Moderately Low Hazard
HAZMAT (In Transit)	166	Moderately Low Hazard
HAZMAT (Fixed site)	130	Low Hazard
Fire	128	Low Hazard
Civil Unrest	114	Low Hazard

The results of this Hazard Analysis were compiled by a Special LEPC meeting on June 19, 2014.

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Section III: Response

Response Organization and Assignment of Responsibilities

A. Chairman of Legislature Responsibilities, Powers, and Succession

1. The Legislature Chairman is ultimately responsible for County emergency response activities and:

   a) may assume personal oversight of the County emergency response organization if the scope and magnitude of the emergency indicates the necessity of personal management and direction of the response and recovery operations,
   b) controls the use of all County owned resources and facilities for disaster response,
   c) may declare a local state of emergency in consultation with the County Administrator, County Emergency Manager and the County Attorney, and may promulgate emergency orders and waive local laws, ordinances, and regulations (see Annex 3),
   d) may request assistance from other counties and the State when it appears that the incident will escalate beyond the capability of County resources,
   e) may provide assistance to others at the request of other local governments both within and outside Schuyler County.

2. In the event of the unavailability of the County Chairman, the following line of command and succession has been established by County Law No. 1 of the Year 1972 to ensure continuity of government and the direction of emergency operations:

3. In the event that any other elected or appointed official, other than the County Legislators, is unable to discharge his or her duties or is absent from the County,

   a) The duly appointed deputies shall act in their stead.
   b) In the event that a deputy has not been appointed, the Legislature Chairman may appoint a temporary deputy to discharge such duties for the duration of the emergency or until the Legislature Chairman relieves them of their appointments.

B. The Role of the Emergency Manager

1. The Emergency Manager coordinates County emergency response activities for the Legislature Chairman, and recommends to the Legislature Chairman to declare a local state of emergency based on the severity of the situation and the necessity to use additional executive power to respond effectively to the emergency.

2. The Emergency Manager:

   a) activates the County's response organization and initiates County response activities
   b) notifies and briefs County departments, agencies and other organizations involved in an emergency response
   c) maintains and manages an emergency operations center (EOC)

NYSDEC OHMS Document No. 201166576-00038

d) facilitates coordination between the County and:
   i) the Incident Commander
   ii) towns and villages in the County
   iii) local governments outside the County
   iv) the State of New York
   v) private emergency support organizations

C. The County Emergency Response Organization

1. The ICS

a) Schuyler County endorses the use of ICS, as developed by the NIMS, and formally adopted by the State of New York, for emergencies requiring multi-agency response. ICS allows flexibility in its implementation so that its structure can be tailored to the specific situation at hand. ICS should be initiated by the emergency forces first responding to an incident. See Annex 1, NIMS Incident Command System Position Description.

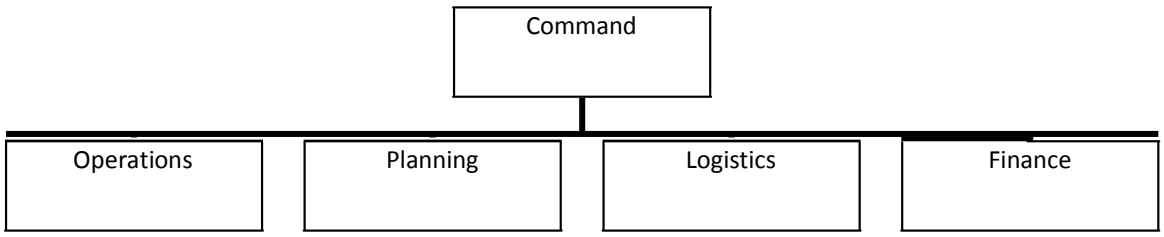
b) ICS is organized by functions. There are five:
   i) Command
   ii) Operations
   iii) Planning
   iv) Logistics
   v) Finance

c) Under ICS, an Incident Commander (IC) has the overall responsibility for the effective on-scene management of the incident, and must ensure that an adequate organization is in place to carry out all emergency functions. The IC directs emergency operations from an Incident Command Post, the only command post at the emergency scene.

d) In minor incidents, the five ICS functions may all be managed directly by the IC. Larger incidents usually require that one or more of the functions be set up as separate sections under the IC.

e) Within the Command function, the ICS has additional responsibilities for safety, Public Information, and Liaison. These activities can be assigned to staff under the IC.

f) An on-scene ICS with all five functions organized as sections is depicted as:



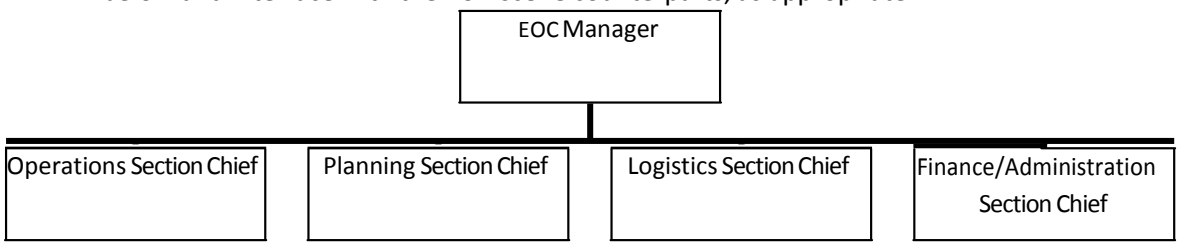
g) During an emergency, County response personnel must be cognizant of the ICS in place and their role in it. Some County personnel may be responders to the scene and part of the on-scene ICS structure in a functional or staff role. Other County personnel may be assigned to the County EOC or other locations where they will provide support to the responders at the scene. All County response personnel not assigned to the on-scene ICS will be coordinated by or through the County Emergency Manager.

NYSDEC OHMS Document No. 201166576-00038

h) The IC is usually selected due to his or her position as the highest ranking responding officer at the scene. The IC must be fully qualified to manage the incident. As an incident grows in size or becomes more complex, a more highly qualified IC may be assigned by the responsible jurisdiction. Thus, a County official could be designated as the IC.

i) A major emergency encompassing a large geographic area may have more than one emergency scene. In this situation, separate ICs may set up command at multiple locations. In this case, an Area Command may be established. The Area Command is structured similar to a normal ICS with one exception; the IC is called the Incident Manager to whom all ICs report. A County official could be designated as an Incident Manager and numerous County response personnel assigned to the Area ICS.

j) County response personnel operating at the EOC will be organized by ICS function, as depicted below and interface with their on-scene counterparts, as appropriate.



k) Whenever the ICS is established, County response forces should be assigned to specific ICS functions wherever they are needed, including at the scene, at the EOC in a support role, or at an Area Command, if established. See Table 1 for sample ICS functional assignments by agency. Assignments may change as situation dictates or as directed by the EOC Manager.

2. Agency Responsibilities

a) The Legislature Chairman shall exercise ultimate responsibility and oversight for emergency response, and shall delegate ICS responsibilities as described in Table 1, or as special circumstance warrants.

Managing Emergency Response

A. Incident Command Post and Emergency Operations Center

1. On-scene emergency response operations will be directed and controlled by the IC or Unified Command from an ICP located at or near the emergency site. This will be the only CP at the emergency scene. All other facilities at the scene used by agencies for decision-making should not be identified as a command post.

NYSDEC OHMS Document No. 201166576-00038

TABLE 1 - ICS Function and Response Activities by Agency

AGENCY	ICS FUNCTION	RESPONSE ACTIVITIES
Legislature Chairman	Command (Agency Administrator) Public Information	Ultimate situation responsibility Declaration of State of Emergency; Promulgation of Emergency Orders; Emergency Public Information
Emergency Management	Command, Liaison(EOC Manager)	Activation and Coordination of the EOC, EOC Management, Liaison and Coordination with governments and organizations
Sheriff's Department	Operations	Communications, Warning, Law Enforcement
Public Health Dept.	Safety	Medical Care and Treatment; Disease and Pest Control; Emergency Worker Protection
Public Works Department	Operations	Debris Removal and Disposal; Damage Assessment; Sewage Control
Office of Fire Coordinator	Operations	Fire Suppression and Control; Search and Rescue; HAZMAT Exposure Control
Social Services	Operations	Human Needs Assessment
Office for Aging	Operations	Human Needs Assessment
Planning	Planning	Situation Assessment and Documentation Advance Planning
Mental Health	Operations	Crisis Counseling
Coroner	Operations	Identification and Disposition of dead
American Red Cross	Operations	Temporary Housing and Shelter; Emergency Feeding and Clothing
County Clerk	Logistics	Supply and Procurement; Information Systems
Personnel Officer	Logistics/ Planning	Human Resources
County Treasurer	Finance/Administration	Accounting; Record-Keeping
Purchasing Director	Finance/Administration	Purchasing; Accounting; Record-Keeping

NYSDEC OHMS Document No. 201166576-00038

2. The County EOC will be used to support ICP activities and to coordinate County resources and assistance. The EOC can also be used as an Area Command Post when Area Command is instituted.
3. A CP will be selected by the IC based upon the logistical needs of the situation and located at a safe distance from the emergency site.
4. If a suitable building or structure cannot be identified and secured for use as an ICP, the County Emergency Services Command trailer may be used.
5. The County EOC is located at the County Public Safety Building, 106 Tenth Street, Basement Level, Watkins Glen, New York 14891.
6. If a disaster situation renders the EOC inoperable, an auxiliary EOC may be established at the County Sheriff's Department Building at Watkins Glen International, located at 2790 County Route 16, Watkins Glen, New York or at another location designated at the time.
7. The EOC can provide for the centralized coordination of County and private agencies' activities from a secure and functional location.
8. County agencies and other organizations represented at the EOC will be organized according to ICS function under the direction of the Emergency Management Coordinator.
9. Though organized by ICS function, each agencies' senior representative at the EOC will be responsible for directing or coordinating his or her agency's personnel and resources. Where the agency is also represented at the scene in an ICS structure, the EOC representative will coordinate the application of resources with the agency's representative at the scene.
10. The Emergency Manager is responsible for managing the EOC or auxiliary EOC during emergencies.
11. If required, the EOC will be staffed to operate continuously on an as needed basis. Designation of shifts will be established as conditions warrant by the Emergency Manager.
12. Each agency will routinely identify its personnel assigned to the EOC. This identification is to be provided to the Emergency Manager and updated, as changes occur.
13. Work areas will be assigned to each agency represented at the EOC.
14. Internal Security at the EOC during an emergency will be provided by the County Sheriff's Department:
    a) all persons entering the EOC will be required to check in at the security desk located at the main entrance
    b) all emergency personnel will be issued a pass (permanent or temporary) to be worn at all times while in the EOC
    c) temporary passes will be returned to the security desk when departing from the premises
15. EOC space should be maintained in an emergency-operating mode by the Emergency Manager at all times. During non-emergency periods, the EOC can be used for meetings, training and conferences.
16. The ICS Planning function is responsible for emergency situation reporting at the EOC and has established procedures and forms to be used.
17. The Emergency Manager maintains a Standard Operating Guide (SOG) for activating, staffing and managing the EOC. This SOG can be found as Annex 2 to this section of the plan.

NYSDEC OHMS Document No. 201166576-00038

B. Notification and Activation

1. Upon initial notification of an emergency to the County 9-1-1 Communications Center (CC), the CC will immediately alert the Emergency Management Office and appropriate County official(s). This initial notification sets into motion the activation of County emergency response personnel.

2. Each emergency in Schuyler County should be classified into one of three Response Levels, according to the scope and magnitude of the situation:

DAY-TO-DAY OPERATIONS

Controlled emergency situation without serious threat to life, health, or property, which requires no assistance beyond initial first responders.

ELEVATED THREAT LEVEL

Limited emergency situation with some threat to life, health, or property, but confined to limited area, usually within one municipality or involving small population.

IMMINENT THREAT LEVEL

Full emergency situation with major threat to life, health, or property, involving large population and/or multiple municipalities.

3. Emergency response personnel will be activated according to the Response Level classification:

   a) For Day to Day Operations, only the staff of the Emergency Management Office are notified and activated as appropriate.
   b) For Elevated Threat Level, level one staff is activated and augmented by select members of the county response organization as determined by the Emergency manager.
   c) For Imminent Level, full EOC staffing is achieved as soon as possible. Except for first responders to the scene, assignment of County response personnel to other locations including the emergency scene will be made through the EOC.

C. Assessment and Evaluation

1. As a result of information provided by the EOC Section Chiefs, the Command Staff will, as appropriate, in coordination with the on-scene Incident Commander:

   a) develop priorities by evaluating the safety, health, economic, environmental, social, humanitarian, legal and political implications of a disaster or threat;
   b) analyze the best available data and information on the emergency;
   c) explore alternative actions and consequences;
   d) select and direct specific response actions.

NYSDEC OHMS Document No. 201166576-00038

D. Declaration of Local State of Emergency and Promulgation of Local Emergency Orders

1. In response to an emergency, or its likelihood, upon a finding that public safety is imperiled, the Legislature Chairman may proclaim a Local State of Emergency pursuant to section 24 of the State Executive Law.
2. Such a proclamation authorizes the Legislature Chairman to deal with the emergency situation with the full executive and legislative powers of county government.
3. This power is realized only through the promulgation of local emergency orders. For example, emergency orders can be issued for actions such as:
   a) establishing curfews
   b) restrictions on travel
   c) evacuation of facilities and areas
   d) closing of places of amusement or assembly
4. Annex 3: *Instructions for Declaring a State of Emergency and Issuing Emergency Orders* describes the requirements for proclaiming a Local State of Emergency and promulgating Local Emergency Orders.
5. Chief Elected officials of towns and villages in Schuyler County have the same authority to proclaim local states of emergency and issue local emergency orders within their jurisdiction.
6. Whenever a Local State of Emergency is declared in Schuyler County or local emergency orders issued, such action will be coordinated, beforehand, with the affected municipality.
7. Emergency responders have implicit authority and powers to take reasonable immediate action to protect lives and property absent an emergency declaration or emergency orders.

E. Public Warning and Emergency Information

1. In order to implement public protective actions there should be a timely, reliable and effective method to warn and inform the public.
2. Activation and implementation of public warning is an Operations section responsibility.
3. Information and warnings to the public that a threatening condition is imminent or exists can be accomplished through the use of the following resources. (Though public warning may, in many cases, be implemented solely by on-scene personnel, the use of the systems in (a), (b), and (c) below require strict coordination with the County EOC.)
   a) Emergency Alert System (EAS) - formerly known as Emergency Broadcast System (EBS), involves the use of the broadcast media including television, radio, and cable TV, to issue emergency warnings. Can be activated by means of a telephone or encoder by select County officials including the Emergency Manager. (See Annex 4: Schuyler County Emergency Alert System (EAS).
   b) Emergency service vehicles with siren and public address capabilities - Many police and fire vehicles in the County are equipped with siren and public address capabilities. These vehicles may be available, in part, during an emergency for “route alerting” of the public. This capability exists County-wide but should not be relied upon for public warning.
   c) NY-Alert, is the New York State All-Hazard Alert and Notification web-based system that is utilized by the state and locally to provide emergency information.
   d) Door-to-door public warning may be conducted in some situations by the individual alerting of each residence/business in a particular area. This can be undertaken by any designated group

NYSDEC OHMS Document No. 201166576-00038

such police, fire police, and firefighters, visiting each dwelling in the affected area and relating the emergency information to the building occupants. To achieve maximum effectiveness, the individual delivering the warning message should be in official uniform.

e) Ping4 Alerts is an App based alerting system that County officials can use to push out alerts to a geographic area.
f) Social media can also be affective in delivering warnings and messages.

4. County officials will advocate, as part of their normal dealing with special institutions such as schools, hospitals, nursing homes, major industries and places of public assembly, that they obtain and use tone-activated receivers/monitors with the capability to receive NOAA Weather Radio (NWR) with SAME reception.

5. Efforts may be made for providing warning information to the hearing impaired, non-English speaking population groups, and the Amish community.

6. The Command Staff position of Public Information Officer, if established, or its function, may in coordination with on-scene IC:

   a) establish and manage a Joint Information Center (JIC) from where to respond to inquiries from the news media and coordinate all official announcements and media briefings
   b) authenticate all sources of information being received and verify accuracy
   c) provide essential information and instructions including the appropriate protective actions to be taken by the public, to the broadcast media and press
   d) coordinate the release of all information with the key departments and agencies involved both at the EOC and on-scene
   e) check and control the spreading of rumors
   f) arrange and approve interviews with the news media and press by emergency personnel involved in the response operation
   g) arrange any media tours of emergency sites

7. The JNC may be established at the EOC or at any location where information flow can be maintained, without interfering with emergency operations.

F. Emergency Medical and Public Health

1. A high impact disaster can cause injury and death to large numbers of people. In addition, damage to and destruction of homes, special facilities, and vital utilities may place the public at substantial risk of food and water contamination, communicable diseases, and exposure to extreme temperatures.

2. There may be established within the Operations section an Emergency Medical/Public Health Group to ensure that health and medical problems are being addressed. This Group will be lead by the County Health Department and include representatives from the STREMS EMS Council.

G. Meeting Human Needs

1. The Planning and Operations functions are responsible for ascertaining what human needs have been particularly affected by an emergency and responding to those unmet needs with the available resources of County and local government and with the assistance of volunteer agencies and the private sector.

2. There may be established within the Operations section a Human Needs Branch to perform the tasks associated with (1) above.

NYSDEC OHMS Document No. 201166576-00038

3. Schuyler County along with representatives from the Regional Volunteer Center of the Southern Tier, and VOAD whose purpose is to assist in the coordination of the delivery of human services in Schuyler County, and to advise the Legislature Chairman on human needs issues.
4. Whenever a Human Needs Branch is not established by the Operations section, the Operations Section will confer with the Emergency Manager.

H. Restoring Public Services

1. The Operations and Planning sections are responsible for ascertaining the emergency's effect on the infrastructure and the resultant impact on public services including transportation, electric power, fuel distribution, public water, telephone, and sewage treatment and ensuring that restoration of services is accomplished without undue delay.
2. There may be established within the Operations section a Public Infrastructure Group to perform the tasks associated with (1) above.
3. By written agreement, in the event of a major power outage, New York State Gas and Electric will assign a representative to the EOC to facilitate communications and information flow between the utility and the Operations section.
4. The Operations section may assign a representative to other utility operations centers as appropriate with the consent of the utility.
5. During response operations relating to debris clearance and disposal, Schuyler County should act in cognizance of and in cooperation with the State Highway Emergency Task Force.

I. Resource Management

1. The Planning function is responsible for the identification and allocation of additional resources needed to respond to the emergency situation.
2. Resources owned by the municipality in which the emergency exists should be used first in responding to the emergency.
3. All County-owned resources are under the control of the Legislature Chairman during an emergency and can be utilized as necessary.
4. Resources owned by other municipalities in and outside of Schuyler County can be utilized upon agreement between the requesting and offering government.
5. Resources owned privately cannot be commandeered or confiscated by government during an emergency. However, purchases and leases of privately owned resources can be expedited during a declared emergency. In addition, it is not uncommon for the private sector to donate certain resources in an emergency.

NYSDEC OHMS Document No. 201166576-00038

J. Standard Operating Guides and other supporting plans

1. Each County agency assigned responsibility under this Response portion of the plan may have its own SOGs. These SOGs address activation of personnel, shift assignments at the EOC, assignment to the field including the ICP (if applicable), coordination with other agencies, drills, exercises, and ICS training.
2. Each agency SOG is to be updated at least annually and reviewed at a joint agency planning meeting scheduled by the director of Emergency Management. Copies of each agencies SOG are to be retained by the County Emergency Management Office.
3. The following is a list of functional and hazard specific annexes that support this plan, and are file in the County Emergency Management Office:
   a) Schuyler County Fire Mutual Aid Plan
   b) Schuyler County EMS Mutual Aid Plan
   c) Red Cross Sheltering Plan

The following documents support this portion of the plan and are appended to it:
Annex 1- NIMS Incident Command System Position Descriptions

Annex 2 - Standard Operating Guide for the Schuyler County Emergency Operations Center (EOC)

Annex 3 - Instructions for Declaring a State of Emergency and Issuing Emergency Orders

Annex 4 – Schuyler County Emergency Alert System (EAS)

Annex 5 – TBD

Annex 6 – Schuyler County Mass Casualty Incident Plan

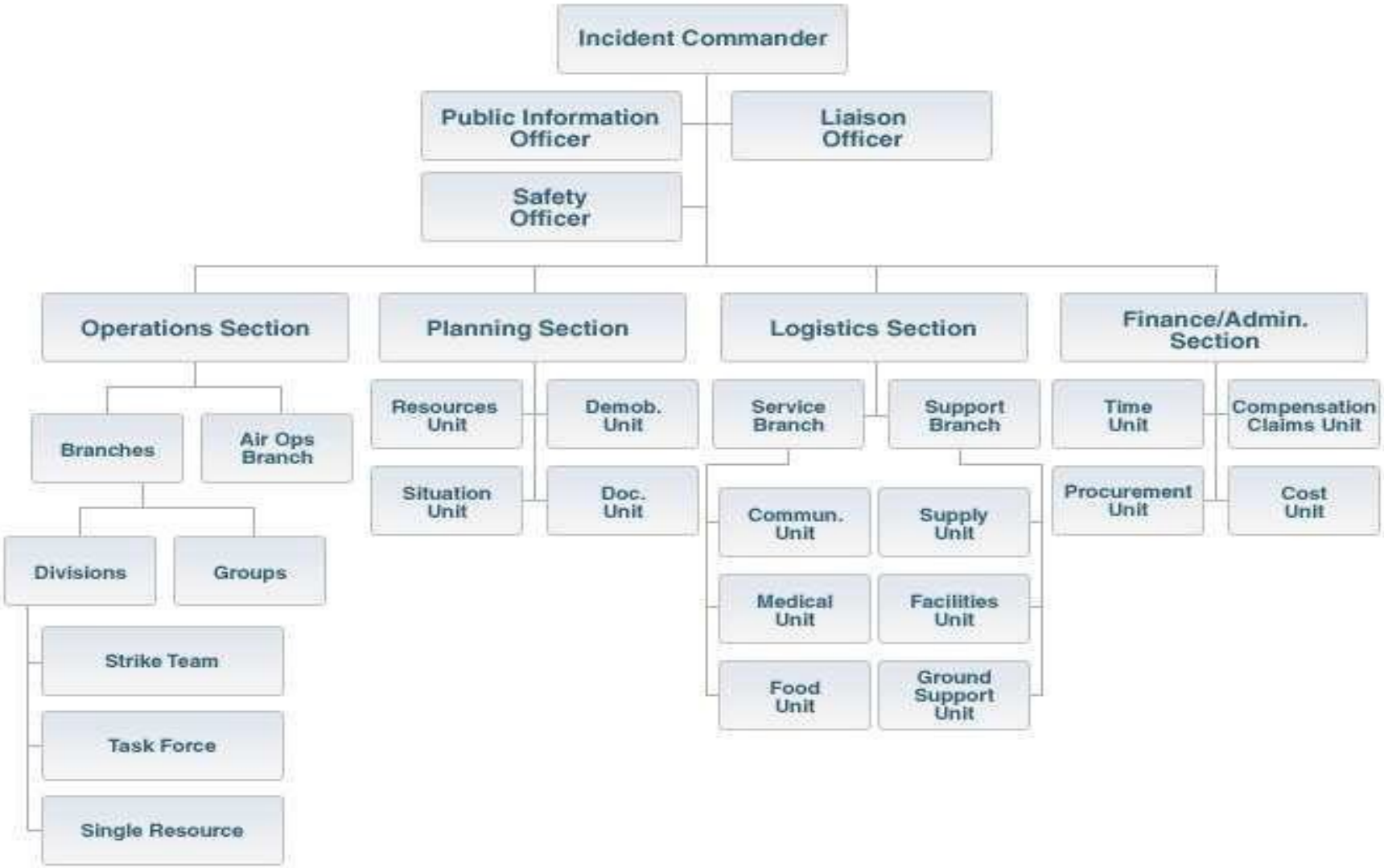
Annex 7 – Schuyler County Mass Fatality Plan

Annex 8 – Schuyler County Hazardous Materials Incident Response Plan

Annex 9 – Animal Emergency Response Plan

NYSDEC OHMS Document No. 201166576-00038

SCHUYLER COUNTY INCIDENT COMMAND SYSTEM ORGANIZATIONAL CHART



NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Section IV- Recovery

A. Damage Assessment

1. All local governments (towns and villages) in Schuyler County should participate in damage assessment activities.

2. The County Emergency Manager is responsible for:

   a) Developing, with local governments, a damage assessment program.
   b) Designating a Damage Assessment Officer for each emergency.
   c) Coordinating damage assessment activities in the County during and following an emergency.
   d) The County Emergency Manager will advise the Chief Elected Official of affected towns, and villages to maintain similar detailed records of emergency expenditures, and supply them with standard documentation forms.

3. All County departments and agencies, as well as local municipalities in the county, should cooperate fully with the County Emergency Manager in damage assessment activities including:

   a) Pre-emergency:
      i) identifying county agencies, personnel, and resources to assist and support damage assessment activities
      ii) identifying non-government groups such as non-profit organizations, trade organizations and professional people that could provide damage assessment assistance
      iii) fostering agreements between local government and the private sector for technical support
      iv) utilizing geographic information systems (GIS) in damage assessment
      v) participate in training

   b) Emergency:
      i) obtaining and maintaining documents, maps, photos and video tapes of damage
      ii) reviewing procedures and forms for reporting damage to higher levels of government
      iii) determining if State assistance is required in the damage assessment process

   c) Post-emergency:
      i) advise county departments and local municipalities of assessment requirements
      ii) selecting personnel to participate in damage assessment survey teams
      iii) May provide training of selected personnel in damage assessment survey techniques
      iv) identifying and prioritizing areas to survey damage
      v) assigning survey teams to selected areas
      vi) completing damage assessment survey reports and maintaining records of the reports

NYSDEC OHMS Document No. 201166576-00038

4. It is essential that, from the outset of emergency response actions, county response personnel keep detailed records of expenditures for:

   a) labor used
   b) use of owned equipment
   c) use of borrowed or rented equipment
   d) use of materials from existing stock
   e) contracted services for emergency response
   f) submitting damage assessment reports to the State Emergency Management Office

5. Damage assessment will be conducted by county and local government employees, such as Public Works, building inspectors, assessors and members of non-profit organizations, such as the American Red Cross. When necessary, non-government personnel from the fields of engineering, construction, insurance, property evaluation and related fields, may supplement the effort.

6. County and local Municipalities damage assessment information will be reported to the Damage Assessment Officer at the EOC.

7. Personnel from county departments and agencies, assigned damage assessment responsibilities, will remain under the control of their own departments, but will function under the technical supervision of the Damage Assessment Officer during emergency conditions.

8. All assessment activities in the disaster area will be coordinated with the on-site Incident Commander and the EOC manager.

9. The Coordinator of Emergency Management, in conjunction with the Damage Assessment Officer, will prepare a Damage Assessment Report which will contain information on the following:

   - destroyed property;
   - property sustaining damage;
   - property sustaining damage, for the following categories:

   a) damage to private property in dollar loss to the extent not covered by insurance:
      i) homes
      ii) businesses
      iii) industries
      iv) utilities
      v) hospitals, institutions and private schools

   b) damage to public property in dollar loss to the extent not covered by insurance:
      i) road systems
      ii) bridges
      iii) water control facilities such as dikes, levees, channels
      iv) public buildings, equipment, and vehicles
      v) publicly-owned utilities
      vi) parks and recreational facilities

NYSDEC OHMS Document No. 201166576-00038

c) damage to agriculture in dollar loss to the extent not covered by insurance:
   i) farm buildings
   ii) machinery and equipment
   iii) crop losses
   iv) livestock

d) cost in dollar value will be calculated for individual assistance in the areas of mass care, housing, and individual family grants
e) community services provided beyond normal needs
f) debris clearance and protective measures taken such as pumping, sandbagging, construction of warning signs and barricades, emergency levees, etc.
g) financing overtime and labor required for emergency operations

SOEM's damage assessment guidance, with appropriate forms, is available from the County Emergency Management Office.

10. The Legislature Chairman, through the Emergency Manager, will submit the Damage Assessment Report to the State Office of Emergency Management. It is required for establishing the eligibility for any State and/or Federal assistance.

Forms for collecting this information are contained in SOEM's Public Assistance Handbook of Policies and Guidelines for Applicants, obtainable from the County Emergency Management Office.

11. Unless otherwise designated by the Legislature Chairman, the Emergency Manager will serve as the County's authorized agent in disaster assistance applications to state and Federal government.

12. The County's authorized agent shall:

a) Attend public assistance applicant briefing conducted by Federal and State Emergency officials.
b) Review SOEM's Public Assistance Handbook of Policies and Guidelines for Applicants.
c) Obtain from the Damage Assessment Officer maps showing disaster damage locations documented with photographs and video tapes.
d) Prepare and submit Request for Public Assistance in applying for Federal Disaster Assistance
e) Assign local representative(s) who will accompany the Federal/State Survey Team(s).
f) Follow up with the designates State and Federal official.
g) Submit Proof of Insurance, if required.
h) Prepare and submit project listing if small project grant.
i) Follow eligibility regarding categorical or flexibly funded grant.
j) Maintain accurate and adequate documentation for costs on each project.
k) Observe FEMA time limits for project completion.
l) Request final inspection of completed work or provide appropriate certificates.
m) Prepare and submit final claim for reimbursement.
n) Assist in the required State audit.
o) Consult with governor's authorized representative (GAR) for assistance.
p) Maintain summary of damage suffered and recovery actions taken.

NYSDEC OHMS Document No. 201166576-00038

B. Planning for Recovery

1. Recovery includes community development and redevelopment.
2. Community Development is based on a comprehensive community development plan prepared under direction of local planning boards with technical assistance provided by the Planning department.
3. Comprehensive community development plans are officially adopted by local government as the official policy for development of the community.
4. Localities with public and political support for land use planning and the corresponding plan implementation tools such as zoning ordinances, subdivision regulations, building codes, etc. have pre-disaster prevention and mitigation capability by applying these methods successfully after disasters.
5. A central focal point of analytical and coordinative planning skills which could obtain the necessary political leadership and backing when needed, is required to coordinate the programs and agencies necessary to bring about a high quality level of recovery and community redevelopment.
6. County Government decides whether the recovery will be managed through existing organizations with planning and coordinative skills or by a recovery task force created exclusively for this purpose.
7. A recovery task force will:
   a) Direct the recovery with the assistance of county departments and agencies coordinated by the Emergency Management Coordinator.
   b) Prepare a local recovery and redevelopment plan, unless deemed unnecessary.
8. The recovery and redevelopment plan shall include;
   a) Replacement, reconstruction, removal, relocation of damaged/destroyed infrastructures/buildings.
   b) Establishment of priorities for emergency repairs to facilities, buildings and infrastructures.
   c) Economic recovery and community development.
   d) New or amended zoning ordinances, subdivision regulations, building and sanitary codes
9. Recovery and redevelopment plan will account for and incorporate to the extent practical, relevant existing plans and policies.
10. Prevention and mitigation measures should be incorporated into all recovery planning where possible.
11. Responsibilities for recovery assigned to local governments depend on whether or not a State disaster emergency has been declared pursuant to Article 2-B of the State Executive Law.
12. If the governor declares a State disaster emergency, then under Section 28-a the local governments have the following responsibilities:
    a) Any county, city, town or village included in a disaster area shall prepare a local recovery and redevelopment plan, unless the legislative body of the municipality shall determine such a plan to be unnecessary or impractical.

NYSDEC OHMS Document No. 201166576-00038

b) Within 15 days after declaration of a State disaster, any county, town or village included in such disaster area, shall report to the DPC through SOEM, whether the preparation of a recovery and redevelopment plan has been started and, if not, the reasons for not preparing the plan.
c) Proposed plans shall be presented at a public hearing upon five (5) days' notice published in a newspaper of general circulation in the area affected and transmitted to the radio and television media for publications and broadcast.
d) The local recovery and redevelopment plan shall be prepared within 45 days after the declaration of a State disaster and shall be transmitted to the DPC. The DPC shall provide its comments on the plan within 10 days after receiving the plan.
e) A plan shall be adopted by such county, city, town or village within 10 days after receiving the comments of the DPC.
f) The adopted plan:
    i) May be amended at any time in the same manner as originally prepared, revised and adopted; and
    ii) Shall be the official policy for recovery and redevelopment within the municipality.

C. Reconstruction

1. Reconstruction consists of two phases:

    a) Phase 1-short term reconstruction to return vital life support systems to minimum operating standards
    b) Phase 2-long term reconstruction and development which may continue for years after a disaster and will implement the officially adopted plans, policies and programs for redevelopment including risk reduction projects to avoid the conditions and after a disaster and will implement officially adopted plans and policies, including risk reduction projects, to avoid conditions and circumstances that led to the disaster.

2. Long term reconstruction and recovery includes activities such as:

    a) Scheduling planning for redevelopment
    b) Analyzing existing State and Federal programs to determine how they may be modified or applied to reconstruction
    c) Conducting of public meetings and hearings
    d) Providing temporary housing and facilities
    e) Public assistance
    f) Coordinating State/Federal recovery assistance
    g) Monitoring of reconstruction progress
    h) Preparation of periodic progress reports to be submitted to SEMO

3. Reconstruction operations must conform to existing State/Federal laws and regulations concerning environmental impact.

4. Reconstruction operations in and around designated historical sites must conform to existing State and FEMA guidelines.

NYSDEC OHMS Document No. 201166576-00038

D. Public Information on Recovery Assistance

1. Public Information Officers are responsible for making arrangements with the broadcast media and press to obtain their cooperation in adequately reporting to the public on:

   a) What kind of emergency assistance is available to the public?
   b) Who provides the assistance?
   c) Who is eligible for assistance?
   d) What kinds of records are needed to document items, which are damaged or destroyed by the disaster.
   e) What actions to take to apply for assistance.
   f) Where to apply for assistance.

2. The following types of assistance may be available:

   a) Food stamps (regular and/or emergency)
   b) Temporary housing (rental, mobile home, motel)
   c) Unemployment assistance and job placement (regular and disaster unemployment)
   d) Veteran's benefits
   e) Social Security benefits
   f) Disaster and emergency loans (Small Business Administration, Farmers Home Administration)
   g) Tax refund
   h) Individual and family grants
   i) Legal assistance

All the above information will be prepared jointly by the Federal, State, and County PIOs as appropriate and furnished to the media for reporting to public.

NYSDEC OHMS Document No. 201166576-00038

Section V: Mitigation

A. Designation of County Hazard Mitigation Coordinator

1. The Schuyler County Emergency Manager has been designated by the Legislature Chairman as the County Hazard Mitigation Coordinator.
2. The County Hazard Mitigation Coordinator is responsible for coordinating County efforts in reducing hazards in Schuyler County.
3. All County agencies will participate in risk reduction activities with the County Hazard Mitigation Coordinator.
4. The County Hazard Mitigation Coordinator will participate as a member of the County Emergency Planning Committee.

B. Mitigation Policies and Programs

1. County agencies are authorized to:
   a) promote policies, programs and activities to mitigate hazard risks in their area of responsibility
   b) Examples of the above are:
      i) encourage municipalities to adopt comprehensive community development plans, zoning ordinances, subdivision regulations, and building codes that are cognizant of and take into account significant hazards in the county
      ii) promote compliance with and enforcement of existing laws, regulations, and codes that are related to hazard risks, e, g., building and fire codes, flood plain regulations
      iii) encourage New York State DOT, the Schuyler County Highway Department and local public works departments to address dangerous conditions on roads used by hazardous materials carriers.
2. The Schuyler County Planning Department is responsible for land use management of county owned land and the review of land use management actions throughout the county, including:
   a) advising and assisting local governments in the county in developing and adopting comprehensive master plans for community development, zoning ordinances, subdivision regulations and building codes
   b) assisting and advising the local planning boards in the review process of local zoning and subdivision actions
   c) participation in State Environmental Quality Review Act (SEQRA) review of proposed projects in the County
3. In all of the above activities, the County Planning Department will take into account the significant hazards in Schuyler County.
4. The Schuyler County Emergency Planning Committee will attempt to meet quarterly to identify specific hazard reduction actions that could be taken for those hazards determined by the hazard analysis to be most significant.

NYSDEC OHMS Document No. 201166576-00038

5. For each hazard reduction action identified, the following information is to be included by the County Emergency Planning Committee:
   a) a description of the action
   b) a statement on the technical feasibility of the action
   c) the estimated cost of the action
   d) the expected benefits of the action and the estimated monetary value of each benefit
   e) an estimate of the level of community support for the action
6. A Risk Reduction Report shall prioritize and make recommendations concerning the identified actions.
7. A Risk Reduction report shall be presented to the County Emergency Management Office for review, revision, and approval or disapproval, as deemed necessary.
8. The Risk Reduction Report shall be presented to the County Chairman and the County Legislature, via the Public Safety Committee, for consideration and funding.

C. Monitoring of Identified Hazard Areas

1. The County Highway Department will develop, with the necessary assistance of other County departments, the capability to monitor identified hazard areas, in order to detect hazardous situations in their earliest stages.
2. As a hazard or emergency is detected, this information is to be immediately provided to the County Emergency Management Office or the Schuyler County 9-1-1 Communications Center, as appropriate, and disseminated per protocol by the Schuyler County 9-1-1 Communications Center.
3. When appropriate, monitoring stations may be established regarding specific hazard areas where individuals responsible to perform the monitoring tasks can be stationed.
4. Monitoring tasks include detecting the hazard potential and taking measurements or observations of the hazard. (Examples include: rising water levels, toxic exposure levels, slope and ground movement, mass gatherings, the formation and breakup of ice jams, shore erosion, dam conditions, and the National Weather Service's Skywarn program).

NYSDEC OHMS Document No. 201166576-00038

Section VI: Glossary

Legislature Chairman: As the term is referred to in Article 2-B of NYS Executive law, and Local Law Number 5 of the year 2004, shall mean the Chairperson of the Board of Legislators or in the event he or she is absent from Schuyler County or unable to discharge the duties of his or her office, his or her successor as provided in the reference local law.

Comprehensive Emergency Management: The implementation and understanding of the interactions and interdependencies of all four phases of emergency management (preparedness, response, recovery and mitigation). Focusing on all phases, aids in minimizing the impacts of emergencies on Schuyler County.

Disaster: The occurrence or imminent threat of wide spread or severe damage, injury, or loss of life or property resulting from any natural or man-made causes.

Emergency: Any incident, whether natural or manmade, that requires responsive action to protect life or property.

Emergency Action Plans: A plan developed by the incident command post or emergency operations center identifying priorities, objectives and resources to be used during response to an incident.

Emergency Operations Center: The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities takes place.

Emergency Phases: Emergency phases include preparedness, response, recovery and mitigation.

Emergency Service Organization: A public or private agency, voluntary organization or group organized and functioning for the purpose of providing fire, medical, ambulance, rescue, housing food or other services directed toward relieving human suffering, injury or loss of life or damage to property as a result of an emergency, including non-profit and governmentally-supported organizations, but excluding governmental agencies.

Endangered Populations: A subset of a population which is particularly susceptible to an emergency situation. This could be based on demographics or a geographic area.

Functional Annex: An annex to the comprehensive emergency management plan which addresses a particular function of response actions (i.e., emergency alerts).

Hazards Specific Annex: An annex to the comprehensive emergency management plan which addresses a particular hazard (i.e., hazardous materials)

HAZNY: An automated hazard analysis program provided by the New York State Office of Emergency Management.

Incident Command Post: The field location where the primary functions are performed.

NYSDEC OHMS Document No. 201166576-00038

Incident Command System: A standardized on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

Chief Elected Official: The person having overall authority and responsibility for the political subdivisions of Schuyler County. For example, a village major or town supervisor.

Mitigation: Activities providing a critical foundation in the effort to reduce the loss of life and property from natural and/or manmade disasters by avoiding or lessening the impact of a disaster and providing value to the public by creating safer communities. Mitigation seeks to fix the cycle of disaster damage, reconstruction and repeated damage. These activities or actions, in most cases will have a long-term sustained effect.

National Incident Management System: A set of principles that provides a systematic, proactive approach guiding government agencies at all levels, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size location, or complexity, in order to reduce the loss of life or property and harm to the environment.

Prevention: Actions to avoid an incident or to intervene to stop an incident from occurring..

Reconstruction: Consists of two phases which focus on returning vital life support systems to minimum operating standards and long term development to recover from and mitigate future impacts of similar incidents.

Recovery: The development, coordination, and execution of service- and site-restoration plans; the reconstitution of government operations and services; individual, private-sector, nongovernmental, and public assistance programs to provide housing and to promote restoration; long-term care and treatment of affected persons; additional measures for social, political, environmental, and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents.

Response: Activities that address the short-term, direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs.

Route Alerting: Utilizing emergency service vehicle public address systems to drive through neighborhoods and alert residents to or a possible emergency.

Unified Command: An Incident Command System application used when more than one agency has incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the UC, often the senior persons from agencies and/or disciplines participating in the UC, to establish a common set of objectives and strategies and a single Incident Action Plan.

NYSDEC OHMS Document No. 201166576-00038

PAGE LEFT INTENTIONALLY BLANK

NYSDEC OHMS Document No. 201166576-00038

Record of Revisions

Revision Number	Date of Revision	Date Entered	Revision Made by
2014 Update	4/13/2015	4/13/2015	WLK

NYSDEC OHMS Document No. 201166576-00038

Summary of Changes to Schuyler County CEMP

Revision Instructions

Please remove and Replace or add pages as indicated in the table below
File this page behind your Revision Record in the CEMP
Note if you only have an Electronic Copy replace entire copy with latest version of CEMP

Page Reference	Change
Throughout	Overall Update

NYSDEC OHMS Document No. 201166576-00038

CEMP Distribution List

Copy #	Organization	Paper Copy	Electronic Copy
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

NYSDEC OHMS Document No. 201166576-00038

Dennis A. Fagan
Chairman

Stacy B. Husted, Clerk
County Auditor

Jamee L. Mack, Deputy Clerk

SCHUYLER COUNTY LEGISLATURE

105 Ninth Street Unit 6
Watkins Glen, NY 14891
Phone: (607) 535-8100

E-Mail us at Legislature@co.schuyler.ny.us
Website: www.schuylercounty.us

"An Equal Opportunity - Affirmative Action Employer"

SCHUYLER COUNTY LEGISLATORS – 2015

Dennis A. Fagan, Chairman
Old District I (R)
P.O. Box 335
Tyrone, NY 14887
292-3687 (H)
Chairman@co.schuyler.ny.us

Stewart F. Field, Jr.
Old District I (R)
2393 Old Road
Watkins Glen, NY 14891
535-2335
SField@co.schuyler.ny.us

Barbara J. Halpin
New District I (R)
2845 Newtown Road
Odessa, NY 14869
594-3683 (H)
halpin@lightlink.com

Philip C. Barnes
New District VI, (R)
203 Lakeview Ave.
Watkins Glen, NY 14891
481-0482 (C)
PBarnes@co.schuyler.ny.us

Van A. Harp
New District II (R)
4363 Cartmell Lane
Burdett, NY 14818
329-2160 (C)
harpassociates@hotmail.com

Michael L. Lausell
New District III (D)
5120 County Road 4
Burdett, NY 14818
227-9226 (C)
MLausell@co.schuyler.ny.us

James W.D. Howell, Jr.
New District IV (R)
132 Turner Park
Montour falls, NY 14865
535-7266 (H) 227-1141 (C)
JHowell@co.schuyler.ny.us

Carl H. Blowers
New District V, (R)
3910 Hawks View Dr, PO Box 416
Montour Falls, NY 14865
535-6174 (H) 237-5469 (C)
carlblowersmf@aol.com

NYSDEC OHMS Document No. 201166576-00038

Resolution No. 3
SCHUYLER COUNTY LEGISLATURE

Organizational Meeting
January 7, 2015

Intro. No. 2
Approved by Committee ____
Approved by Co. Atty. GBR

Motion by Halpin
Seconded by Field
Vote: 8 Ayes to 0 Noes
Name of Noes

RE: "CONTJNUITY OF LOCAL GOVERNMENT" FOR 2015

BE IT RESOLVED, that the duly authorized vice-chairman successors for "Continuity of Local Government", as prescribed by Schuyler County Local Law No. 1-1972, be adopted for the year 2015, as follows:

Chairman	Dennis A. Fagan
#1 Vice-Chairman	Stewart F. Field, Jr.
#2 Vice-Chairman	Barbara J. Halpin
#3 Vice-Chairman	Philip C. Barnes
#4 Vice-Chairman	Van A. Harp
#5 Vice-Chairman	Michael L. Lausell
#6 Vice-Chairman	James W.D. Howell, Jr.
#7 Vice-Chairman	Carl H. Blowers

NYSDEC OHMS Document No. 201166576-00038

Schuyler County Emergency Management Office

Emergency Management Coordinator

William Kennedy	607-243-9205 (H)	607-481-0525 (C)	607-535-8200 (O)

Deputy Coordinator

Brian Gardner		607-742-9326 (C)	607-535-8200 (O)

Secretary

Jennifer Geck			607-535-8200 (O)

Volunteer Deputy Fire Coordinators – Contact through the 911 center

Rick Churches

Jason Kelly

Dale Jaynes

Kirk Smith

NYSDEC OHMS Document No. 201166576-00038

Declaration of a local State of Emergency

A State of Emergency is hereby declared in_____effective at

_____ on_____.
(time) (date)

This State of Emergency has been declared due to _____

_____.

This situation threatens the public safety.

This State of Emergency will remain in effect until rescinded by a subsequent order.

As the Chief Elected Official of_____, I,_____,
(name of Official)

exercise the authority given me under section 24 of the New York State Executive Law, to preserve the public safety and hereby render all required and available assistance vital to the security, well-being, and health of the citizens of this_____.

I hereby direct all departments and agencies of_____to take whatever steps necessary to protect life and property, public infrastructure, and provide such emergency assistance deemed necessary.

_____ _____
(Signature) (Name)

_____ _____
(title) (date)

NYSDEC OHMS Document No. 201166576-00038

Local Emergency Evacuating Order

Local Emergency Order Evacuating Vulnerable Areas:

I,_____, the_____, in

accordance with a declaration of a State of Emergency issued on

___, 20__, and pursuant to Section 24 of the State Executive Law, hereby

order the evacuation of all persons from the following zones: (locales)

Zone 1. _____

Zone 2._____

This evacuation is necessary to protect the public from _____

This order is effective immediately and shall apply until removed by order of the Chief Executive.

Failure to obey this order is a criminal offense.

Signed this_____day of _____, 20_
_____(date)
(month)

at_____o'clock, in_____, New York
(time) (municipality)

Signed:_____ Title: _____

Witness:_____ Title: _____

NYSDEC OHMS Document No. 201166576-00038

Schuyler County Emergency Management
Damage Report Instructions

Objective of the Report – This report provides a situational awareness of a given area or jurisdiction. Combined with other area/jurisdiction reports, the EOC can use these reports to assess scope of the area affected, current status, if additional impacts can be expected and additional resources will be required.

Do Not Delay this report for lack of data. The report can be updated as information becomes available or more accurate.

Submit form electronically (email), by fax or verbally convey information to the County Emergency Management Office.

The top part of the must be filled out for each report. See sample below

Report Number: 1	Event Name: Meads Creek Flooding
Date/Time of Event: Date: Aug 10 2014 Time (24 hr): 1730	Date/Time of Report: Date: Aug 11 2014 Time (24 hr): 0800

Items 1 & 2

Must be filled out to have clear information as to name of jurisdiction and person filling out report, contact informations should clarification of report content be required.

Items 3
Provides the overview of the incident

Item 4
Is to give an understanding of amount of assessment completed. You do not need to be at 100% to submit report

Item 5-10
Fields should only be filled in if information is available. If there is nothing to report foe a specific field, it should be left blank

Item 11
A brief description should be provided regarding ongoing actions, outside assistance being provided or sought, and immediate needs and resource requirements. Descriptions of ongoing concerns based on current situation and planning assumptions may also be listed in this section.

Schuyler County Emergency Management

NYSDEC OHMS Document No. 201166576-00038

Damage Report

Report Number:	Event Name:
Date/Time of Event: Date: Time (24 hr):	Date/Time of Report: Date: Time (24 hr):

1. Municipality: _____ Person Submitting: _____

2. Phone: _____ Email: _____

3. Briefly Describe Emergency and Area Affected (Hamlets, Roads, homes, etc.):

4. Percent of Initial Assessment Completed: ____ **25%** ____ **50%**_____**75%**_____**100%**

Critical Infrastructure	Roads	Bridges	Water	Sewer	Electric	Gas
5. Out of Service						
6. Damaged						
9. Destroyed						

10. Rough Estimate of Cost of Damages: _____

11. Special Information/Concerns:

NYSDEC OHMS Document No. 201166576-00038

ESF #1: APPENDIX 1 - SCHUYLER COUNTY TRANSPORTATION AND EMERGENCY EVACUATION PLAN

I. Purpose

To establish a comprehensive plan for the safe and orderly evacuation of people and domestic animals from areas within the Schuyler County (also referred to as "The County") that are threatened by natural or man-made disasters or emergencies.

II. Situation

A. Schuyler County understands its responsibility for protecting the lives and property of the citizens of Schuyler County, including, where possible, the lives of domestic animals.

B. The priorities during all phases of an emergency are as follows:
   1. Save and protect the greatest number of people at risk
   2. Ensure the personal safety of emergency responders and all employees
   3. Save and protect as many residential, business and industrial properties as possible
   4. Save and protect as much vital infrastructure as possible
   5. Restrain the spread of environmental damage
   6. Minimize human hardship and economic interruptions
   7. These priorities will be addressed in collaboration with and supported by local, county, state, and federal authorities

C. There are numerous hazards that could result in the need to evacuate a portion of the County. While it is extremely unlikely that a situation would occur of such magnitude to require evacuation of the entire county, this plan is designed to address that possibility.

D. Schuyler County maintains the ability to respond to "all hazards" emergency incidents, including but not limited to:
   1. Natural
      - Drought
      - Earthquakes
      - Rural-urban interface fires and wildland fires
      - Flooding
      - Heat emergencies
      - Severe storms – Summer and Winter

2. Technological and Human-Caused
   - Energy emergency
   - HazMat sites and transportation routes
   - Household chemical waste
   - Radiological incidents
   - Terrorism and/or Weapons of Mass Destruction Incidents that include CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) incidents.
   - Civil disorder

E. Locations with the most potential for evacuation due to **Hazardous Materials** accidents include:
   1. NYS Rte 14 Chemicals in Transport
   2. Water Treatment Facilities Watkins Glen, Montour Falls
   3. NS Railroad Chemicals in Transport

F. Potential evacuation areas due to **natural disasters** (flood, wildfire, microburst, lightning, high winds, etc.) include:
   1. All heavily populated areas
   2. Areas surrounding county creeks and streams

G. Evacuation notification and mobilization will be done using Zones (see Tab A) and/or other routes as identified by the EOC.

H. Animals will be identified as service animals or pets. Service animals and pets will be taken to designated areas. For further information on the care of animals, see Annex 9 Animal Response Plan.

III. Assumptions

A. There are varying degrees of probability that emergency situations outlined above will occur, thereby prompting Schuyler County to provide immediate assistance in an effort to save lives and protect property.

B. Some disasters occur slowly, providing ample time for early public pre-notification and orderly, well-planned evacuation. Many types of disasters occur without warning and limit the ability to provide early pre-notification.

C. An evacuation may be required at any time of day or night and in any kind of weather. County assets may be heavily strained and traffic congestion must be expected.

D. It is anticipated that large numbers of people would voluntarily evacuate upon notification to do so.

E. Some people will refuse to evacuate despite an obvious life-threatening hazard. Any first responders involved in the evacuation that encounters a person refusing to evacuate shall document:
   1. Their names(s)
   2. Date(s) of birth
   3. Social Security Number(s)
   4. Next of kin or contact person and phone number
   5. Date and time the information is received
   6. Location

NYSDEC OHMS Document No. 201166576-00038

F. In most situations evacuees will have little preparation time and will require maximum support in reception areas, particularly for food, bedding and clothing.
G. In any evacuation situation, those directing emergency operations must seek to ensure that people with special needs are well cared for - this includes the elderly and persons with disabilities, nursing home and hospital patients, and prisoners in Schuyler County Jail.
H. The Incident Commander will be notified immediately of any identified special needs population requiring evacuation. The Incident Commander will determine the need for any special equipment required to evacuate individuals with special needs. The Incident Commander will request assistance from the Sheriff's Office, local Police Department and the local Fire Departments, or other county departments in addressing these needs.
I. Service animals will stay with their owners, unless they become unruly or overly aggressive in the shelter.
J. Schuyler County will maintain emergency management resources ready to respond to emergencies as they arise in the county and, where possible, to support surrounding jurisdictions.
K. The Emergency Operations Center (EOC) in conjunction with the Schuyler County 911 center is the primary communications link relating to the alert, activation, deployment, and incident management of all responding agencies within Schuyler County.
L. Schuyler County uses the National Incident Management System (NIMS) while responding to emergencies at the site of the incident and to manage the EOC. NIMS is a standardized emergency management system for organizing personnel and equipment resources.
M. All events begin locally, and are ultimately resolved locally. Schuyler County senior leaders are tasked with preparation, prevention, response, mitigation, and recovery. All requests for additional assets will be directed through properly established procedures from Schuyler County, the State of New York, or the Federal Government.

IV. Objectives

A. Activation of the Emergency Operations Center (EOC) during an emergency will be determined in accordance with the Schuyler County Emergency Operations Plan.
B. The Incident Commander may request utilization of the mobile command center for use as an onsite command post. The location and nature of the event will determine the site for the Command Center.
C. In the event of a disaster, all affected and potentially affected EOCs identified by the counties EOC Director will be notified for activation. These EOCs will work in collaboration with the counties EOC and Schuyler County Office of Emergency Management in supervising the evacuation to host areas. Each host area's EOC, if established, will insure the reception and care of their arriving evacuees.

NYSDEC OHMS Document No. 201166576-00038

D. The Incident Commander may determine that "Shelter in Place" is an appropriate response in lieu of evacuation. In such cases, the NY Alert, Ping4 Alerts, radio, social media and other public service advisories may be used to notify the affected public to shelter in place indoors. Additional information specific to the identified hazard will be communicated to the public (e.g., informing the public to alter air intakes into their building). The Incident Commander, in collaboration with the Emergency Management Office, will approve the information and instructions communicated to the public.
E. In the case of long term emergencies, if necessary and as time permits, the EOC will attempt to ensure that evacuees are instructed as to what supplies they need to take with them. This includes such items as bedding, cots (if available), rugged clothing for two weeks, two weeks supply of easily prepared foods, medical items, etc.
F. The Incident Commander has the authority to order any large-scale evacuation due to natural or man-made hazards.
G. The decision to allow evacuees to return to the evacuated area will be made after the threat has passed and the evacuated area is determined to be free of dangerous contamination or other hazards, as necessary and practical. The area will be inspected by personnel of the local Fire Department, the local Police Department, and the appropriate utilities for safety verification prior to the re-entry order. Some specific re-entry considerations are:
    1. The threat that caused the evacuation is completely resolved.
    2. Only a safe level of, or no contamination, exists in the affected area.
    3. Homes/buildings have been inspected to determine their safety and structural integrity.
    4. Determination of the number of persons in shelters who require transport to their homes has been made and transportation is available.
    5. Determination of long-term housing requirements has been completed.
    6. Arrangements to coordinate traffic control and movement have been completed.
    7. The public has been informed of known potential problems and hazards and any corresponding precautions.
    8. All necessary infrastructure (electric, water, gas) is at operational levels sufficient to support life, and has been reactivated by trained utility personnel.

V. Movement and Transportation of Evacuees

A. General

1. The preferred method of evacuation notification is door to door, personal contact. First responders may use their vehicle mounted public address systems and the news media to assist in notifying the public of the need to evacuate and will provide specific instructions. NY Alert is a valuable tool that will assist in the notification process. Considerations for public safety, time, staffing, and the special needs of the people to be evacuated should be evaluated when determining the method of evacuation. Small areas may be evacuated by telephoning residents and businesses directly if staffing and time allows. **Evacuees will be responsible for taking their animals to the reception center for sheltering.** The Schuyler County Office of Emergency Management will make available a list of appropriate shelters for animals as determined by Schuyler County Office of Emergency Management and Schuyler County Public Health.
2. The on scene Incident Commander will determine the need for an evacuation for a natural or man-made disaster. The evacuation procedures may be pre-determined, but in any case, they must be flexible enough to be modified as necessary either at the time an evacuation is deemed necessary, or at any time during the evacuation.
3. The primary evacuation mode used by the public will be privately owned vehicles. If possible, two-way traffic will be maintained on evacuation routes to permit continued emergency vehicle access. Traffic control points will be located as needed for anticipated traffic volume and complexity of evacuation routes. **During an evacuation, the State of New York has determined that 45 miles per hour is the safest maximum speed.**
   a. Major streets may be designated as one-way traffic routes as needed. Emergency and mass evacuation vehicles may have designated streets for their exclusive use.
   b. Law enforcement officials will obtain wrecker services to remove disabled vehicles.
   c. Evacuees without a means of transportation should go to the nearest pick-up location to await bus or truck transportation (see Tab B).
4. The Schuyler County Highway Department will provide traffic control devices, such as signs and barricades, within the county roads. Additional assistance or equipment for use along State or county or Town roadways may be requested from the County.
5. The Incident Commander will designate a Transportation Officer to coordinate public transportation resources in conjunction with the Emergency Operations Center. These resources may include school or ARC busses, vans, and multi-purpose vehicles.
6. Schuyler County will arrange transportation to the shelter/reception centers for those who report to a pick up location.

7. The Incident Commander will determine the location of Schuyler County reception centers. Red Cross and their National Shelter Program may also provide long-term sheltering.
8. Local van service and volunteers will deliver elderly, infirm or disabled persons needing evacuation assistance to their closest shelter/reception centers.
9. When possible, medical care needs should be taken into account in determining the best shelter for an individual. Through inter-hospital agreements and prior coordination, critical patients will be relocated to hospitals in host areas. The hospital's written evacuation plans will serve as the foundation of the evacuation of that facility. The EOC will facilitate air and ground resource distribution to assist hospital evacuation.
10. The method of evacuation of non-ambulatory patients from nursing homes should be defined in the nursing home's evacuation plan. The Transportation Officer will assist in obtaining transportation if requested to do so.
11. School district superintendents, and superintendents of private schools, will have responsibility for the evacuation of public schools. However, if sufficient time exists, parents will be notified to pick up their children. This prevents separation of children and parents, and allows for the use of additional school buses for other transportation needs.
12. The Sheriff is responsible for the evacuation of the jail and its prisoners. They will coordinate reception and shelter of prisoners at the facility to which they're evacuating. They will coordinate with the other departments to assist in ensuring security of their prisoners while in route to the receiving facility.

B. **Additional Considerations for evacuation of Schuyler County to other jurisdictions.**
   1. Coordination between the evacuating and receiving jurisdiction is essential to ensure smooth operations. This should include arrangements for the evacuating jurisdiction to provide additional equipment and operators for shelters, food, water, and other essentials.
   2. If evacuees are transported outside the county, the reception centers must be prepared to transport these people onward to their assigned mass care facilities.

VI. General

A. When notified of an emergency situation or a need for an evacuation, Schuyler County local first responders will respond with incident-specific personnel, equipment, and apparatus to the emergency site, staging area or other location in support of the incident.

B. Pre-disaster, emergency response and recovery plans are based on an all-hazards approach to emergency management. Standard operating guidelines describe how emergency tasks will be performed.

C. Schuyler County Office of Emergency Management will address all phases of emergency planning, response and recovery issues by coordinating the use of those resources belonging to private, governmental, and non-government agencies. Coordinated efforts with hospitals and County Public Health Department ensure that all medical operations are thoroughly integrated.

VII. Source and Use of Resources

A. Resources will be provided, as needs escalate, to meet incident demands, or as assessed by the Incident Commander. Coordination and distribution of the resources will be through the Emergency Operations Center and /or the Schuyler County Office of Emergency Management.

B. The county is comprised of a cadre of professionals that are capable of providing an all-hazards emergency response to incidents occurring within the County's jurisdictional boundaries, and when possible, and upon approval, to adjacent regional jurisdictions. When notified of an emergency situation, response personnel, equipment, and apparatus are dispatched to the emergency site, staging area, or other location as appropriate. The County's dispatch center will establish communication links among response personnel and/or the EOC when it is activated. Radios will serve as the primary form of communication. Telephones and ham radios provided by the Radio Amateur Civil Emergency Services (RACES) will serve as the backup methods.

VIII. Implementation of NIMS

A. During the activation of the EOC, the County's Emergency Operations Center will coordinate the support of non Schuyler County resources dealing with the incident with the Schuyler County Office of Emergency Management Multi-Agency Coordination Center (MACC). The principal objective of the National Incident Management System (NIMS) is to unify command and control, improve communication among involved activities, and to ensure that all County resources are made available, if they are required, for the effective resolution of the emergency incident.

B. Schuyler County through its Office of Emergency Management will support all EOC activities when the EOC is activated. Responsibilities of the representatives to the EOC include:

1. Provide a reliable communications link for resource support to the Incident Command Post
2. Support the overall incident management strategy
3. Develop a consolidated EOC Action Plan
4. Assign appropriate personnel, consistent with pre-emergency plans and Standard Operating Procedures

5. Review, evaluate, and revise (as needed) the consolidated EOP Action Plan and IAP
6. Resource allocation and the coordination of resources to specific field operations
7. Coordinate the deployment of field units to ensure the availability of appropriate resources to deal with situations at multiple locations
8. Communicate with field forces and keep a record of their status
9. Assist the community to get back to normal by starting the recovery process as soon as possible
10. Notification, interaction, and collaboration with the Schuyler County Office of Emergency Management, including its Multi-agency Coordination Center if activated.

IX. Organization and Assignment of Responsibilities

A. General

Schuyler County is responsible for plan development and the deployment of resources to all emergency events occurring within the jurisdictional boundaries of the County. As such, the County will place into motion the following duties and responsibilities in the event that an emergency evacuation is necessary.

1. Sheriff's Department or local Police department
   - Determine alternate evacuation routes
   - Provide traffic control
   - Maintain security in the evacuated area
   - Assist in issuing warnings to the public
   - Establish parking and security at the reception, lodging, and feeding centers
2. Fire Departments
   - Respond to hazardous material and fire incidents
   - Provide on-scene coordination and advise of the need for evacuation
   - Provide emergency medical services as needed
   - Provide fire security in evacuated areas and assistance in issuing warnings to the public
   - Coordinate with area ambulances for the transport of non-ambulatory and persons with special needs
3. Emergency Operations Center
   - Inform the public of evacuation requirements and action
   - Provide the public with essential emergency information and directions
4. Schuyler County and local Highway Departments
   - Maintain evacuation routes
   - Provide traffic contra-flow devices as necessary
   - Provide transportation for evacuees without private vehicles

5. Other County Departments
   - Respond to the EOC and provide support as requested by the Incident Commander
   - Provide support as requested by the Emergency Operations Center or the Office of Emergency Management.
6. School District Liaison
   - Evacuate students in the affected area to predetermined locations per established procedures
   - Close schools and release students in accordance with pre-established procedures
   - Coordinate the use of school busses and facilities as needed to support the overall evacuation
7. Animal Control
   - Estimate the number and types of animals in the risk area
   - Coordinate the evacuation routes for the animals with the EOC
   - Mobilize transportation and cages/pens for the animals as necessary
   - Identify areas and facilities in which to house evacuated animals
8. Schuyler County Office of Emergency Management (SCEMO)
   - Record statistical data regarding the evacuation to include the number of evacuees, personnel, animals, and expenses for reimbursement.

B. The dissemination of all information will be coordinated through the Schuyler County Emergency Management Office, the Sheriff's office and/or the Joint Information Center (JIC).

X. Emergency Operations Center Personnel

A. Incident management within the Emergency Operations Center will be accomplished utilizing the Incident Command System. At a minimum, the EOC Director's position is activated. Depending upon the size or complexity of the incident, the EOC Director may delegate other functional responsibilities and duties including (refer to Schuyler County CEMP Annex 2 Emergency Operations Center Plan for further information):

- EOC Staff
  - Public Information Officer
  - Liaison Officer
  - Safety Officer
- Operations Section
- Logistics Section
- Planning Section
- Intelligence Section
- Admin/Finance Section

B. Because of the unique characteristics of any evacuation operation, distinctive positions and duties may be established within the EOC structure. Examples of these positions and duties are:
   1. Evacuation Coordinator
      - This position would normally work under the Operations Section in the EOC
      - The Evacuation Coordinator may work with the American Red Cross (ARC), a Mass Care Coordinator (if the position is established), or a member organization of the Volunteer Organizations Active in Disaster (VOAD), among others.
      - Responsibilities of this position include:
      - Ensuring that patients are removed from hospitals, nursing homes, and other health care facilities that are inside the risk area
      - Ensuring that transportation and medical care is provided to patients evacuated from the risk area
      - Ensuring that care for those unable to evacuate the risk area is continued
   2. Public Information Officer
      - Duties unique to the PIO function in an evacuation situation include:
        - Informing the public of areas that are under evacuation orders
        - Providing a list of items that evacuees should take with them
        - Announcing pick-up locations for evacuees if they do not have transportation
        - Announcing the location of mass care facilities
        - Keeping the public informed regarding policies and activities that are specific to the evacuation
        - Informing evacuees of the action(s) to take for the safe evacuation of pets and farm animals
   3. Logistics
      - Duties unique to the Logistics function in an evacuation situation include:
        - Coordinating with neighboring jurisdictions that address supporting evacuees, mass care and shelters
        - Coordinating the procurement of provisions or services necessary to maintain the evacuation, such as:
          - Food
          - Water
          - Medical Supplies
          - Sanitation services
          - Electricity
          - Bathroom facilities
      - Coordination of fuel operations necessary to maintain the evacuation and emergency response needs.

XI. Scope of Operations

A. The Schuyler County Office of Emergency Management is tasked with providing resource support and coordination during emergency situations. Additionally, SCEMO will serve as assistants to the Incident Commander for command and control of the incident as needed.

B. The County serves a population in excess of 18,000 residents, and encompasses a land area of almost 331 square miles. The County has mutual- aid agreements with NYS, all Fire departments in the county. The population increases daily through an influx into the County through the tourist season.

XII. Hazards

Because of the location and geologic features, the area is vulnerable to the damaging effects of natural, technological and human-caused hazards. Events may occur at any time and may create varying degrees of damage and economic hardship to individuals, businesses, and the governments residing in the county. Hazards that were identified in the County Hazard Vulnerability Analysis were:

- Natural
  - Ice Storm
  - Severe Winter Storm
  - Extreme Temps
  - Severe Storms
  - Flooding
  - Fire
- Technological and Human-Caused
  - Energy/Utility emergency
  - HazMat sites and transportation routes
  - Transportation Accident
  - Terrorism and/or Weapons of Mass Destruction Incidents that include CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives) incidents
  - Civil Disorder

XIII. Administration and Logistics

A. Schuyler County provides for the accountability of its response efforts through a records management system that tracks details of each emergency incident from its inception through its demobilization.

B. All transportation, staff hours, and other costs associated with evacuations must be itemized in accordance with the New York State of Emergency Management and FEMA. Copies of all documents will be sent to the Office of Emergency Management within twenty-four (24) hours of compilation.

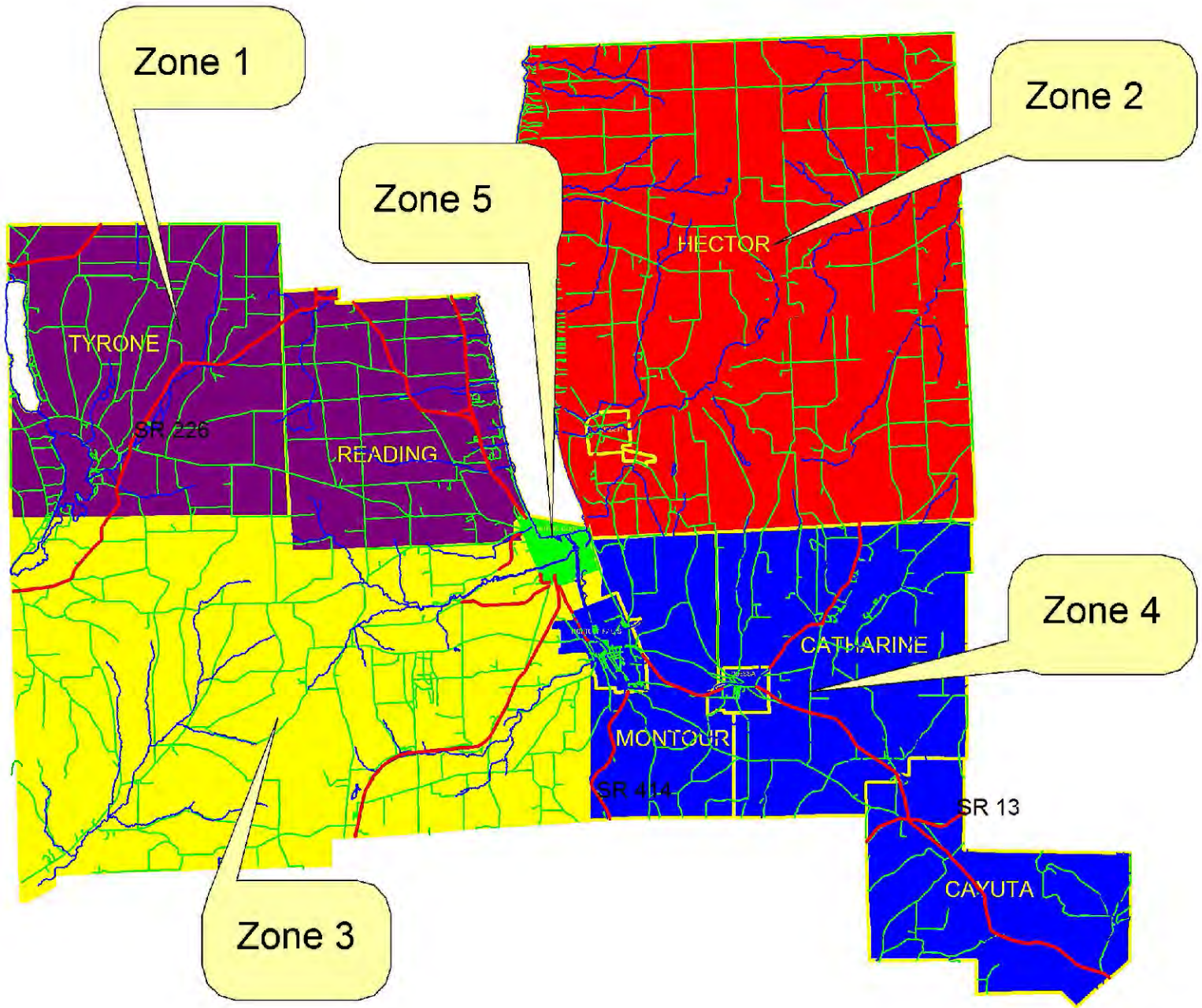
NYSDEC OHMS Document No. 201166576-00038

XIV. Plan Development Maintenance and Distribution

A. This plan was developed in conjunction with the Schuyler County Comprehensive Emergency Management Plan. The Schuyler County Office of Emergency Management will direct maintenance of the plan through appropriate representatives.

B. The Schuyler County Office of Emergency Management is responsible for coordinating full reviews and updates of the Evacuation Plan every two (2) years, or more frequently if deemed necessary by the Office of Emergency Management.

NYSDEC OHMS Document No. 201166576-00038



Townships
Feature Name:
- CATHARINE
- CAYUTA
- DIX
- HECTOR
- MONTOUR
- ORANGE
- READING
- TYRONE

Villages
Feature Name:
- BURDETT
- MONTOUR FALLS
- ODESSA
- WATKINS GLEN

Water

Roads
Water
Highways

Evacuation Zones

0 20090 40181
1" = 20090ft

N W E S

THINK GIS

NYSDEC OHMS Document No. 201166576-00038

Tab A – Schuyler County Evacuation Routes

Do to circumstances and complexity of a developing emergency/disaster situations, it may require deviation from the plan to meet the overall objective of the plan.

Zone 1	
	Direction
To North	Use State Route 226, 14, & 14A to Yates County
To South	Use State Route 226 to Steuben County
	Use State Route 14A, & 14 to Chemung County

Zone 2	
	Direction
To North	Use State Route 414 to Seneca County
	Use State Route 228 & 227 to Tompkins County
To South	Use State Route 414, to 14 to Chemung County
	Use State Route 228, to 224 to Chemung County
To West	Use State Route 79, 228 & 227 to Tompkins County

Zone 3	
	Direction
To North	Use State Route 226, 414 & County Route 16 to Steuben County
To South	Use State Route 226, 414 & County Route 16 to Steuben County

Zone 4	
	Direction
To North	Use State Route 14, 224 & 228 to Tompkins or Seneca County
To South	Use State Route 14, 224 & 228 to Chemung County
To West	Use State Route 228 to Chemung County

Zone 5	
	Direction
NOTE	Zone 5 may be directed to follow one or more of the other Zones directions due to nature and location of incident.

Tab B – Schuyler County Evacuation Transportation Pick Up Locations by Zone*

Zone 1	
	Pick Up Location
Town of Tyrone	Tyrone Fire Station 3600 State Route 226
Town of Reading	Reading Town Hall 3914 County Rte 28
Zone 2	
	Pick Up Location
Town of Hector	Valois-Logan-Hector Fire Station 5736 State Route 414
	Burdett Fire Station 3830 Willow Street Burdett
	Mecklenburg Fire Station 4495 County Rte 6
Zone 3	
	Pick Up Location
Town of Orange	Monterey Fire Station 1465 South Street
	Bradford Central School 2820 State Rte 226
Town of Dix	Beaver Dams Fire Station 1165 County Rte 19
Zone 4	
	Pick Up Location
Town of Cayuta	Cayuta Town Hall 6360 State Rte 224
Town of Catharine	Odessa Fire Station 300 E Main Street
Town of Montour	Schuyler County Human Services Building 323 Owego St. Montour Falls
Zone 5	
	Pick Up Location
Village of	Watkins Glen Community Center 195 S Clute Park Rd
Watkins Glen	WGHS Field-House 301 12th Street Watkins Glen

* All locations are subject to change do to circumstances and complexity of a developing emergency/disaster situations, it may require deviation from the plan to meet the overall objective of the plan.

NYSDEC OHMS Document No. 201166576-00038

Record of Revisions

Revision Number	Date of Revision	Date Entered	Revision Made by

NYSDEC OHMS Document No. 201166576-00038

Summary of Changes to Schuyler County ESF 1

Revision Instructions

Please remove and Replace or add pages as indicated in the table below
File this page behind your Revision Record in ESF 1
Note if you only have an Electronic Copy replace entire copy with latest version of ESF 1

Page Reference	Change

NYSDEC OHMS Document No. 201166576-00038

Schuyler County Hazardous Materials Plan

NYSDEC OHMS Document No. 201166576-00038

Original Document-

Reviewed by NYS Office of Fire Prevention and Control – July 31, 2011
Adopted by Schuyler County Legislature – September 12, 2011

Updated - December 2014

Added Section XIII – Extremely Hazardous Substances
Added Section XIV – Liquefied Petroleum Gas
Added Appendix 'F' – Extremely Hazardous Substances
Added Appendix 'G' – Transportation of Liquefied Petroleum Gas

Reviewed by NYS Office of Fire Prevention and Control -
Adopted by Schuyler County Legislature -

Table of Contents

I.	**Purpose**	**4**
II.	**Compliance Requirements**	**5**
III.	**Vulnerability, Risk, and Probable Locations**	**6-7**
IV.	**Pre-incident Planning**	**8**
V.	**Emergency Alerting Procedures**	**9**
VI.	**Incident Levels**	**10-11**
VII.	**Local Responder Roles and Responsibilities**	**12-14**
VIII.	**Evacuation and Relocation**	**15**
IX.	**Clean-up and Recovery**	**16**
X.	**Cost Recovery**	**17**
XI.	**Post-Incident Debriefing and After Action Reports**	**18**
XII.	**Weapons of Mass Destruction / Terrorist Acts**	**19**
XIII.	**Extremely Hazardous Substances**	**20**
XIV.	**Liquefied Petroleum Gas**	**21**

Appendix 'A' – Local Emergency Planning Committee Membership Roster

Appendix 'B' – Hazardous Materials Team Deployment Maps

Appendix 'C' – Schuyler County Fire and Law Enforcement Resources

Appendix 'D' – Hazardous Materials Clean-up Contractors

Appendix 'E' – Emergency Contact Numbers

Appendix 'F' – Extremely Hazardous Substances

Appendix 'G' – Transportation of Liquefied Petroleum Gas (LPG)

NYSDEC OHMS Document No. 201166576-00038

I. Purpose

The purpose of this plan is to provide a management plan for a declared emergency involving the release of hazardous materials. This document serves as a coordination plan which defines the roles and responsibilities of various agencies, groups and individuals during such a declared emergency. The plan covers incidents involving accidental or intentional releases of hazardous materials involving fixed facilities, over the road transportation, pipelines and waterways within Schuyler County. Since the first responders to an emergency of this type will typically be local agencies, it is essential that this plan supplement and work in conjunction with local response plans as well as the Comprehensive Emergency Management Plan established for Schuyler County.

This plan shall be reviewed annually to assure that it is kept up to date and meets current standards. As part of the review process, proposed changes shall be submitted for review and approval to the Office of Fire Prevention and Control Hazardous Materials Bureau. Upon approval from the Office of Fire Prevention and Control, changes shall then be submitted to the Schuyler County Legislature for adoption into the plan.

II. Compliance Requirements

This plan has been developed to comply with the appropriate regulations relating to hazardous materials incidents response. These regulations include:

General Municipal Law 204 F
Article 2B of the Executive Law of New York State
29CFR 1910.120 (q)
Superfund Amendment and Reauthorization Act of 1986 (SARA Title III)

As mandated by federal statute, all hazardous materials incidents within Schuyler County shall be managed by utilizing the National Incident Management System (NIMS) – Incident Command System (ICS). Throughout this document, reference to Incident Command System titles will be used and positions filled as needed.

It is essential that this plan be exercised and tested to assure that it meets the needs of responders and to assure that all responders are well versed and familiar with their roles within the plan.

III. Vulnerability, risk and probable locations

Schuyler County is a very diverse county in terms of physical terrain, commerce, economics, and hazard potential. Many factors must be taken into consideration when looking at the vulnerabilities and probable locations of hazardous material incidents. There are numerous fixed facilities, pipelines, wells and over-the-road transportation sites that pose potential threats for chemical related emergencies.

Schuyler County is a mostly rural community with numerous dairy and agricultural farms located within its boundaries. These farms pose a potential threat in the storage and use of chemical fertilizers. Additionally the microclimate around Seneca Lake has proven to be very conducive for the growing of grapes and wine manufacturing. There are an ever growing number of wineries and vineyards that add the potential for chemical and fertilizer related incidents. Because of the availability of these chemicals for agricultural purposes, along with the legal use of these chemicals, an ever increasing threat is posed by the illegal manufacturing of methamphetamines. Illegal manufacturing operations have already been seized in remote hunting cabins, motel rooms and residential structures, demonstrating the wide array of facilities being utilized in attempts to avoid police detection.

Other fixed facility sites of potential chemical related incidences, are two large salt manufacturing facilities located within the county. Cargill Salt and US Salt operate salt mining and processing facilities along the edge of Seneca Lake. By process and location, these facilities pose a potential threat that could impact the facility, the community and the ecological balance of the lake. Due to the salt mining process utilized in this area, energy companies are showing an ever increasing interest in utilizing the formed caverns for storage of propane, methanol, and natural gas. Energy companies currently utilize abandoned salt caverns for storage of natural gas and propane with other companies proposing additional storage facilities in the future. In addition to these underground storage facilities, Enterprise Products also operates a distribution facility in the northern portion of the county. Propane is delivered to the facility through a pipeline system generally located in the central portion of the county running north to south. Propane is stored in large under ground storage caverns which serve as a distribution point for over the road transporters. Because of this facility serving as a distribution point, this facility poses not only a fixed facility threat but also the potential for a pipeline or over-the-road transportation accident. **(See Section XIV)** A connection to this pipeline also exists south of the village of Watkins Glen and runs easterly into Tompkins County. This portion of the pipeline carries various types of chemicals from the central United States to chemical companies in the Northeast.

With the discovery of large natural gas reserves, natural gas exploration and processing has become a very prominent activity in the region as well as Schuyler County. Schuyler County has had numerous wells drilled into the Trenton Black

River formation and future considerations are being made for wells in the Marcellus and Utica shale formations. During the development of these wells, large amounts of chemicals and by-products of the drilling process may be used or produced and may pose a possible threat for accidental spillage. These wells currently deliver large amounts of natural gas into pipelines for transmission to cities in the eastern portions of New York and the United States. Natural gas companies operating transmission lines within Schuyler County include Fortuna Energy, EOG Corp., Columbia Gas, Chesapeake Energy, and Dominion Transmission, Inc. These transmission pipelines stand as a potential threat for accidental releases.

In addition to the aforementioned threats, Schuyler County has potential threats from man-made incidents. Watkins Glen International (WGI), located in the south central portion of the county, annually hosts the largest single sporting event in New York State: the NASCAR Sprint Cup Series race. This event brings in excess of a hundred thousand people to the area and concentrates that population into its 1100 acre facility. Because of this large concentration of people in a relatively small area, this site stands as a potential threat for terrorist activities. Another threat to the community and WGI facility is posed by the large quantities of auto racing fuels and liquids transported and stored during race events.

Each year, numerous festivals also take place that bring tens of thousands of visitors to different locations within the county:

- Finger Lakes Wine Festival at WGI
- Italian-American Festival at Clute Park on Seneca Lake's south shore
- Independence Day celebration held at Clute Park
- Seneca Lake Wine and Food Festival at Clute Park
- Beer Fest at WGI
- Village Christmas in downtown Watkins Glen

All are examples of festivals that bring large concentrations of people to the area, making them potential targets for man-made incidents.

IV. Pre-incident Planning

Pre-incident planning is the most effective way to assure that the needs of the public, first responders, government, and private agencies are met should an incident occur. Schuyler County has taken the lead role in pre-planning for hazardous materials incidents within the county by establishing a Local Emergency Planning Committee (LEPC). Under the direction of the Schuyler County Emergency Management Office, the LEPC is set up as a partnership between local, county and state government representatives, as well as representatives of private corporations. The LEPC is tasked with identifying possible hazards found within the county and potential sites of a hazardous materials incident. Included in this identification process are fixed facilities, pipelines and areas for over-the-road transportation accidents. Members of the LEPC are listed in Appendix 'A' of this document.

Local emergency responders shall identify sites for potential hazardous materials incidents within each of their response jurisdictions. Identifying and locating potentially hazardous chemicals in fixed facilities as well as high impact populations should be included in this planning process. Local emergency responders should preplan for these potential hazards and their pre-plans should work in conjunction with this document.

The Schuyler County Fire Coordinator's Office shall have responsibility for the coordination of hazardous materials training for responders. This should include efforts to ensure that all responders are trained to the Hazardous Materials First Responder Operations level as a minimum. In addition to coordinating training, the Fire Coordinator's Office shall coordinate drills with first responders to exercise the provisions of this document. In designing these drills, the Coordinator's Office should attempt to utilize scenarios applicable to identified or anticipated risks to Schuyler County. Exercises of this plan should be conducted annually at a minimum.

Being that hazardous materials incidences can be very labor intensive, the fire coordinator's office shall be responsible in assuring that all mutual aid agreements are in place and maintained to reflect up-to-date capabilities.

V. Emergency Alerting Procedures

Schuyler County 911 dispatch is the primary dispatch agency for all county emergency responders. The information obtained by dispatchers will assist first responders in approach and size-up information. The following is a list of pertinent, as well as additional, information that may be helpful to responders.

1. Location of incident
2. Name and Phone number of caller
3. Type of incident (motor vehicle accident, spill, pipeline leak, etc.)
4. Number of injuries, if any.
5. If there is any fire involvement

Additional information that may be gathered from caller after emergency response personnel have been dispatched:

1. Material involved in incident (if known)
2. Any placard or labeling information available
3. State of material involved (solid, liquid, gas)
4. Type, size, and shape of container involved
5. Are there any additional sources of information available? (ie. MSDS, shipping papers, etc)
6. If possible, alert first responders of wind direction

As stated previously, local responders will have primary responsibility of command and control of the scene. Upon determination of a level II or level III incident (*see section VI*), the Incident Commander shall request dispatch to make notification to the County Emergency Management Coordinator and Deputy Fire Coordinators.

For reference purposes, local fire and law enforcement organizations having jurisdictional boundaries in Schuyler County are identified in appendix 'C' of this document.

VI. Incident Level

Level I Incident:

This level incident may be a controllable emergency condition that may be handled by the first responding unit or units. The incident is confined to a small area and does not pose an immediate threat to life, environment or property. Actions may focus on recognition, identification and basic tactical decision making to protect the safety of the public and emergency response personnel.

Criteria for Level I:
1. First response units may handle incident.
2. Incident involves single jurisdiction.
3. Does not require evacuation other than affected structure or small geographic area.
4. May be contained to a small geographical area.
5. No immediate threat to life, health, environment or property.
6. Involves known or readily identifiable materials with known physical properties.

Level II Incident:

This type of incident involves a greater hazard or threatens a larger area and poses a potential threat to life, environment or property. Threat from this type of incident may require a limited evacuation of the surrounding area. Incidents of this type are beyond the capabilities of the local fire company and would require the assistance of a regional hazardous material team.

Criteria for Level II:
1. High potential threat to life, health, environment or property.
2. Expanded geographical area within single jurisdiction or area involving multiple jurisdictions.
3. Limited evacuation of nearby residents and/or facilities.
4. Material involved is not readily identifiable.
5. Requires limited mutual aid participation.
6. May involve multiple emergency operations be conducted simultaneously. i.e. fire suppression and evacuation.

Level III Incident:

This type of incident involves a serious risk or threat to a large area or poses a major threat to life, environment or property. Threat from this type of incident may require an evacuation of a large portion of the surrounding area and may involve multiple jurisdictions. Incidents of this type are beyond the capabilities of the local fire company and would require the assistance of regional hazardous material teams and possibly state and/or federal assets.

Criteria for Level III:

1. Serious hazard, severe threat to life, health, environment or property.
2. Effects large geographic area within single jurisdiction or area involving multiple jurisdictions.
3. Major community evacuation of nearby residents and/or facilities required.
4. Requires extensive mutual aid participation.
5. Involves multiple emergency operations be conducted simultaneously. i.e. fire suppression and evacuation.

VII. Local Responders Roles and Responsibilities

Equipment and supplies for response to a hazardous materials incident will be provided initially by local emergency response agencies. As Schuyler County is only equipped with a decontamination team, additional response resources will be obtained through mutual aid agreements with other agencies, local jurisdictions, or private organizations and facilities. State and federal aid may be requested after local resources have been exhausted or determined to be inadequate for the incident. It is essential that officers from local responding agencies ensure that only trained personnel respond to these types of incidents. The following is a list of roles and responsibilities for local and county officials during a hazardous materials incident:

Local responding fire department:

- The highest ranking chief officer on scene shall serve as incident commander.
- The incident commander shall have responsibility for the appointment of an incident safety officer, and determination of need to expand the incident command system. Appointment of section chiefs should be appropriate to the size of the incident and assure that the appointees are properly trained for the position.
- The incident commander shall establish the incident level using the criteria established in Section VI of this document and take appropriate actions according to the guidelines provided below.

Level I Incident

Initial Response Actions should include:

1. **Declaration of an Incident Commander**- The Chief of the local fire department or, in his absence, the ranking fire officer shall serve as incident commander for this level of incident, provided they have the appropriate level of training as established under OSHA 1910.120. Command may be passed to the local chief executive under a declared state of emergency.
2. **Establishment of an incident command post** – A command post should be established using procedures established under the incident command system.
3. **Establishment of an initial isolation distance and a safe zone established –** The Incident commander shall establish safe work zones for emergency responder, which should include establishment of the hot zone and initial isolation area.
4. **Establishment of scene security -** Coordination should be made with law enforcement officials to assure security into the scene.
5. **A safety officer should be appointed.**

Level II Incident

Initial Response Actions should include:

1. **Declaration of an Incident Commander**- The Chief of the local fire department or, in his absence, the ranking fire officer shall serve as incident commander for this level of incident, provided they have the appropriate level of training as established under OSHA 1910.120. Unified command should be established to include fire chiefs from affected fire districts if the incident involves multiple jurisdictions. Command may be passed to the local chief executive under a declared state of emergency.
2. **Establishment of an incident command pos**t – A command post should be established using procedures established under the incident command system.
3. **Establishment of an initial isolation distance and safe zones –**
   The Incident commander shall establish safe work zones for emergency responders, which should include establishment of the hot zone and initial isolation area.
4. **Establishment of scene security** - Coordination shall be made with law enforcement to assure security into the scene.
5. **A safety officer shall be appointed.**
6. **Request of regional hazardous material team –** Request for the nearest regional hazardous material team shall be made through the Schuyler County Dispatch center. (*see Appendix "B")*
7. **Notification to Emergency Management Office -** Schuyler County Dispatch shall notify the Schuyler County Emergency Management Coordinator, or Deputy Coordinators, of the incident and the request for regional Hazardous Material Team response. Emergency Management personnel shall be responsible for the activation of the county emergency operations center and notification to the warning points for State Emergency Management and Office of Fire Prevention and Control. This is important should the need for state or federal resources become necessary.
8. **Notification to Chief Elected Official -** Chief Elected Official of Schuyler County shall be notified for declaration of a state of emergency under NYS Executive Laws, Article 2-B.
9. **Evacuation routes established** – If evacuations become necessary the ranking law enforcement official on scene shall work with the operations chief to establish evacuation routes. (*See Section VIII for evacuation procedures*)

Level III Incident

Initial Response Actions should include:

1. **Declaration of an Incident Commander**- The Chief of the local fire department or, in his absence, the ranking fire officer shall serve as incident commander for this level of incident, provided they have the appropriate level of training as established under OSHA 1910.120**.** Unified command should be established to include fire chiefs from affected fire districts if the incident involves multiple jurisdictions. Command may be passed to the local chief executive under a declared state of emergency.
2. **Establishment of an incident command pos**t – A command post should be established using procedures established under the incident command system.
3. **Establishment of an initial isolation distance and safe zones –**
   The Incident commander shall establish safe work zones for emergency responders, which should include establishment of the hot zone and initial isolation area.
4. **Coordination should be made with law enforcement to assure security into the scene.**
5. **A safety officer shall be appointed.**
6. **Request of regional hazardous material team –** Request for the nearest regional hazardous material team shall be made through the Schuyler County Dispatch center. (*See Appendix "B"*)
7. **Notification to Emergency Management Office -** Schuyler County Dispatch shall notify the Schuyler County Emergency Management Coordinator, or Deputy Coordinators, of the incident and the request for regional Hazardous Material Team response. Emergency Management personnel shall be responsible for the activation of the county emergency operations center and notification to the warning points for State Emergency Management and Office of Fire Prevention and Control. This is important should the need for state or federal resources, becomes necessary.
8. **Notification to Chief Elected Official -** Chief Elected Official of Schuyler County shall be notified for declaration of a state of emergency under NYS Executive Laws, Article 2-B.
9. **Evacuation routes established** – If evacuations become necessary the ranking law enforcement official on scene shall work with the operations chief to establish evacuation routes. (*See Section VIII for evacuation procedures*)

VIII. Evacuation and Relocation

Emergency responders have implicit authority and powers to take reasonable and immediate action to protect lives and property, absent an emergency declaration or issuance of emergency orders. Should the need for large scale evacuations become necessary, a state of emergency should be declared by the chief executive of the authority having jurisdiction. Chief executives of towns and villages located within Schuyler County have the legal authority to declare a state of emergency and issue emergency orders, including evacuations. This legal authority is provided under section 24 of the State Executive Laws. If the incident involves multiple jurisdictions and the need for larger scale evacuations arises, the Chairman of the Schuyler Legislature shall declare a state of emergency and issue emergency orders for evacuation pursuant to the aforementioned statute.

The incident commander should coordinate all evacuations with local law enforcement officials and the ranking law enforcement official on scene should be placed in charge of evacuation operations.

Schuyler County Emergency Management Plan ESF#1: Appendix 1 Emergency Evacuation Plan provides guidance for the safe and orderly evacuation of Schuyler County.

IX. Clean-up and Recovery

During incidents involving the release of hazardous materials, clean-up contractors will be used to remove the spilled chemical. The financial responsibility for clean up shall rest with the party in control of the material when the release occurred. Generally, it shall be the spiller's responsibility to select a clean-up contractor. Any clean-up contactor selected shall assure that their employees meet the requirements of OSHA standard 1910.120 (Hazardous Waste Operations and Emergency Response). The Incident Commander may request a copy of the training certificates for all employees working at the clean-up site to assure that this requirement is met. A list of clean-up contractors may also be provided to the responsible party and selection made from that list. A list of contractors shall be attached as Appendix 'D' of this document.

The New York State Department of Environmental Conservation (DEC) shall be the lead agency in monitoring the clean-up of released chemicals. Agency representatives of the DEC shall have oversight of clean-up operations and shall have authority for environmental testing used to determine if the spill site is safe and meets all applicable state and federal regulations.

X. Cost recovery

The following are recommended steps to follow when trying to recover costs incurred while handling a hazardous substance release. Documentation of actual costs will be the most important records to be kept throughout the incident.

1. Ensure that the spill has been reported to the DEC 24-hour spill hotline. This will help to document the release and can assist with consistency in response details.
2. Keep good documentation of activities at the site and who performed various duties. Include photos of any damaged equipment. If any gear needs to be cleaned or replaced, include photos and submit documentation of the cleaning and pricing.
3. An itemized detailed bill should be sent via certified mail, with return receipt requested, to the spiller or responsible party. This detailed bill should be sent by the lead agency of the authority having jurisdiction and should include copies of bills for any equipment that was required from other departments covered under mutual aid agreements. If equipment is destroyed and compensation is being sought, explain how and why it was lost, including information on how the replacement cost was determined.
4. If payment is not received within thirty (30) days, resubmit the detailed billing via certified mail with return receipt requested. Also it is advisable to note to the responsible party that "John Doe" signed for the initial statement, which was sent earlier.
5. If the second attempt is unsuccessful at recovering costs incurred, the lead agency will need to seek legal counsel (Town/Village Attorney, County Prosecutor, etc) to assist in cost recovery.

Alternative reimbursement may be sought under the Local Governments Reimbursement Program (LGRP). The U.S. Environmental Protection Agency (EPA) has a program designed to reimburse local governments that have been affected by costs beyond those routinely incurred when dealing with a hazardous substance release. The Local Governments Reimbursement Program is found under federal regulations at 40 CFR Part 310, which defines a hazardous substance in section 101 (14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Only emergencies involving CERCLA compounds will be eligible for compensation using the LGR program. This does not include petroleum, crude oil or a fraction thereof.

The LGRP will reimburse local governments for expenses incurred in carrying out temporary emergency measures. These measures must be necessary to prevent or mitigate injury to human health or the environment associated with the release of any hazardous substance, pollutant or contaminant. This financial relief is limited to $25,000 per single response.

XI. Post-incident Debriefing and After Action Reports

This post incident debriefing should be held as soon as is practical to evaluate the response to the incident and make recommendations with regard to additional planning, training and/or equipment. It is intended to be utilized as a method of detailed analysis of emergency operations. All agencies who participated in the event should be invited to participate in the post-incident debriefing. No media representation will be allowed at the debriefing. The debriefing should be coordinated by the Schuyler County Emergency Management Coordinator or his/her designee. Once the facts and a description of the operations involved have been presented by the incident commander, the discussion should be opened for questions, answers and expression of opinions from all those present at the debriefing. The emphasis must be on overall operational improvements and should not focus on embarrassing any individual or group. The debriefing coordinator should conclude the debriefing by summarizing the key points involved and provide additional comments as may be necessary.

After Action Reports/Improvement Plans (AAR/IP's) are a vital tool used for the continued improvement of response to hazardous materials incidents. They include the ability to assess and manage the consequences of a hazardous materials release, either accidental or as part of a terrorist act. Responsibility for the preparation of after action reports and improvement plans, in relation to a major hazardous materials incident (level II or greater) or hazardous materials drill, shall rest with the Schuyler County Emergency Management Office. A representative of the Schuyler County Emergency Management Office shall work with the Incident Commander in the preparation of the AAR/IP and upon completion, a copy shall be sent to all responding agencies involved in the incident or participating in such drill.

NYSDEC OHMS Document No. 201166576-00038

XII. Weapons of Mass Destruction / Terrorist Acts

Terrorist acts and use of weapons of mass destruction would pose a significant threat to the health and well being of residents, visitors, and the environment of Schuyler County. The use of a device containing a chemical, biological, radiological, nuclear, or explosive (CBRNE) would have a significant impact not only on the environment but also the county economically, socially and financially. Such incidents should be treated with care to not only assure the health and safety of everyone involved but also for the successful capture and prosecution of the individuals perpetrating the crime.

Initially, the incident commander for a major terrorist incident will likely be the fire chief on scene. If an act of terrorism or a weapon of mass destruction is either suspected or confirmed, incident command shall be passed to the ranking law enforcement official from the authority having jurisdiction. The ranking law enforcement official shall become incident commander and shall be primarily tasked with securing the crime scene. Notification to the Federal Bureau of Investigation (FBI) local field office shall be made by Schuyler County 911. The fire chief shall then serve as operation chief and coordinate the hazardous materials response agencies and personnel. As state and federal assistance arrives and the scope of the response grows more complex, the need to transition incident command to a higher level may become necessary. Upon arrival, a representative of the FBI shall become incident commander and lead agency for criminal investigation, including evidence collection and custody. The FBI shall coordinate closely with local law enforcement authorities to provide a successful law enforcement resolution to the incident.

NYSDEC OHMS Document No. 201166576-00038

XIII. Extremely Hazardous Substances

Extremely Hazardous Substances (EHS) includes any chemicals or hazardous substances identified by the Environmental Protection Agency (EPA) on the basis of hazard or toxicity and listed under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA). Because of their extremely toxic properties, if these chemicals are released in certain amounts, they may be of immediate concern to the community.

Facilities reporting quantities of "Extremely Hazardous Substances", as listed in 49 CFR Part 355 Appendix 'A', shall be listed in Appendix 'F' of this document. Appendix 'F' shall include a list of each facility's emergency coordinator and their emergency contact number(s). The Schuyler County Fire Coordinator shall work with facilities identified under this section, to examine transportation routes of extremely hazardous substances, areas of impact in the event of a release, either in transit or at the facility, emergency response notification, public notification and, to the extent possible, evacuation plans for potential areas of impact due to a release. All above information shall be included in Appendix 'F' of this document and information forwarded to the Local Emergency Planning Committee (LEPC) and local emergency response agency having jurisdiction for each facility. The Schuyler County Fire Coordinator shall also work with local emergency response agencies to assure training and exercise programs are sufficient for satisfactory response and recovery activities relevant to identified facilities and substances identified under this section. (See also Section IV.)

XIV. Liquefied Petroleum Gas (LPG)

Liquefied Petroleum Gas or LPG, has a number of gases that fall under the "LPG" label, including propane, butane, propylene, butadiene, butylene and isobutylene, as well as mixtures of these gases. As referenced in Section III, transportation of LPG is on the rise with greater amounts and frequency due to the fact of an Enterprise Products storage and truck filling station located on State Route 14 north of the Village of Watkins Glen and a potential for an added increase in quantity due to another proposed storage and transportation depot at the Crestwood Facility located in the Town of Reading.

Appendix 'G' will identify characteristics of LPG, modes of transportation, transportation routes, potential incidents, mitigations strategies, and response guidance.

NYSDEC OHMS Document No. 201166576-00038

Appendix 'A'

Local Emergency Planning Committee

Membership Roster

NYSDEC OHMS Document No. 201166576-00038

LEPC

Local Emergency Planning Committee
1/7/2015

PHIL BARNES
Legislator

Schuyler County
203 Lakeview Ave.
Watkins Glen, NY 14891

JAMES COMBS
Supervisor of Construction & Maintenance- Line

NYSEG
5 Main St
Hammondsport, NY 14840
(607) 569-2388

DONNA DAVIS
Citizen Preparedness

Ameri-Corp
3221 State Route 414
Burdett, NY 14818
(607) 936-3766

JOE BIRD
Health & Safety Manager

U.S. Salt
208 W. Mill St.
Horseheads, NY 14845
(607) 535-2721

STEVE COPP

Schuyler Ambulance (SCVAA)
909 S. Decatur St.,
P.O. Box 2
Watkins Glen, NY 14891
(607) 535-7273

CHRIS DOPPEL
MRO: Binghamton & Ithaca Line

NYSEG
1387 Ithaca-Dryden Road
Ithaca, New York
(607) 347-2179

MIKE COBB

WGI

,
(607) 846-8975

CHRIS CORNETT

WGI

,
(607) 331-4471

EDWARD FLETCHER
Fire Protection Specialist

NYS Office of Fire Prevention and Control
600 College Ave.
Montour Falls, NY 14865
(607)535-7136 ext. 651

JUDY COLEMAN
Disaster Services Program Manager

American Red Cross
123 E. Market St.
Corning, NY 14830
(607) 936-3766

DONNA DAVIS
Schuyler County Emergency Services Coordinator

American Red Cross - Finger Lakes Chapter
3221 State Route 414
Burdett, NY 14818
(607) 535-6973

STACEY FORENZ
Acting Regional Emergency Manager

NYSDOT, Region 6
107 Broadway
Hornell, NY 14843
607-324-8565

NYSDEC OHMS Document No. 201166576-00038

BRIAN GARDNER
Deputy Director

Schuyler County Emergency
Management Office
1858 CR-19
Beaver Dams, NY 14812
(607) 535-8200

JASON KELLY

Burdett Fire Department
3384 CR-7
Burdett, NY 14818

ROBERT LICHAK

,

ERIC HALLMAN

,

BILL KENNEDY
Coordinator

Schuyler County Emergency
Management
106 Tenth Street, Unit 36
Watkins Glen, NY 14891
(607) 535-8202

JOHN MACDOWELL
Resident Engineer

NYSDOT
3545 County Road 16
Watkins Glen, NY 14891
(607) 535-4992

PEARL JAYNE
Nurse Manager Emergency Department

Schuyler Hospital
1375 Gibson Road
Dundee, NY 14837
(607) 535-7121

DON KILCOYNE

Catharine Valley Winery

,

AL MANCIL

NYSEG
1387 Ithaca-Dryden Road
Ithaca, New York
(607) 347-2179

MARCIA KASPRZYK
Public Health Director

Schuyler County Public Health
106 South Perry Street
Watkins Glen, NY 14891
(607) 535-8140

TOM KLASEUS
District Director

New York State Department of Health
NYSDOH Hornell District Office
107 Broadway
Hornell, NY 14843
(607) 324-8371

JIM MCCORMACK
Sergeant

New York State Troopers

,
(585) 755-3238

CHAD KEHOE
Spill Responder

DEC
100 North Main Street
Elmira, NY 14901
(607) 732-2214

GEORGE LAWSON
President and Publisher

The Watkins Glen Review & Express
and The Observer
45 Water Street
Dundee, NY 14837
(607) 243-7600

MATT MCCORMICK

Inergy
7535 Eagle Valley Rd
Savona, NY 14879
(607) 382-5419

NYSDEC OHMS Document No. 201166576-00038

BARRY MOON
Manager

Finger Lakes LPG Storage LLC
111 North Franklin Street
Watkins Glen, NY 14891

MIKE STAMP
President

E. C. Cooper, Inc.
115 E. Fourth Street PO Box 30
Watkins Glen, NY 14891
(607) 535-2731

KRISTEN VANHORN
Planner

Schuyler County

,

TIM O'HEARN
County Administrator

Schuyler County
105 9th St.
Watkins Glen, NY 14891
(607) 535-8106

MICHAEL STROPE

,

BILL YESSMAN
Sheriff

Schuyler County Sheriff's Office
106 10th Street
Watkins Glen, NY 14891
(607) 535-8222

BOB PASS
Regional Community Outreach & Development Manager

NYSEG
4425 Old Vestal Road
P.O.Box 3607
Binghamton, NY 13902-3607
(607) 762-6298

TOM STRUBLE
Chief of Police

Watkins Glen Police Department
303 N. Franklin Street
Watkins Glen, NY 14891
(607) 535-7883

SCOTT RODABAUGH
Regional Spill Engineer

DEC
6274 East Avon-Lima Road
Avon, NY 14414
(585) 226-5427

JEFF TOBEY

,

MARK SMARR
Associate Safety & Health Consultant

NYS Department of Labor
44 Hawley St Rm 901
Binghamton, NY 13902
(607) 721-8211

ROBERT TRAVER

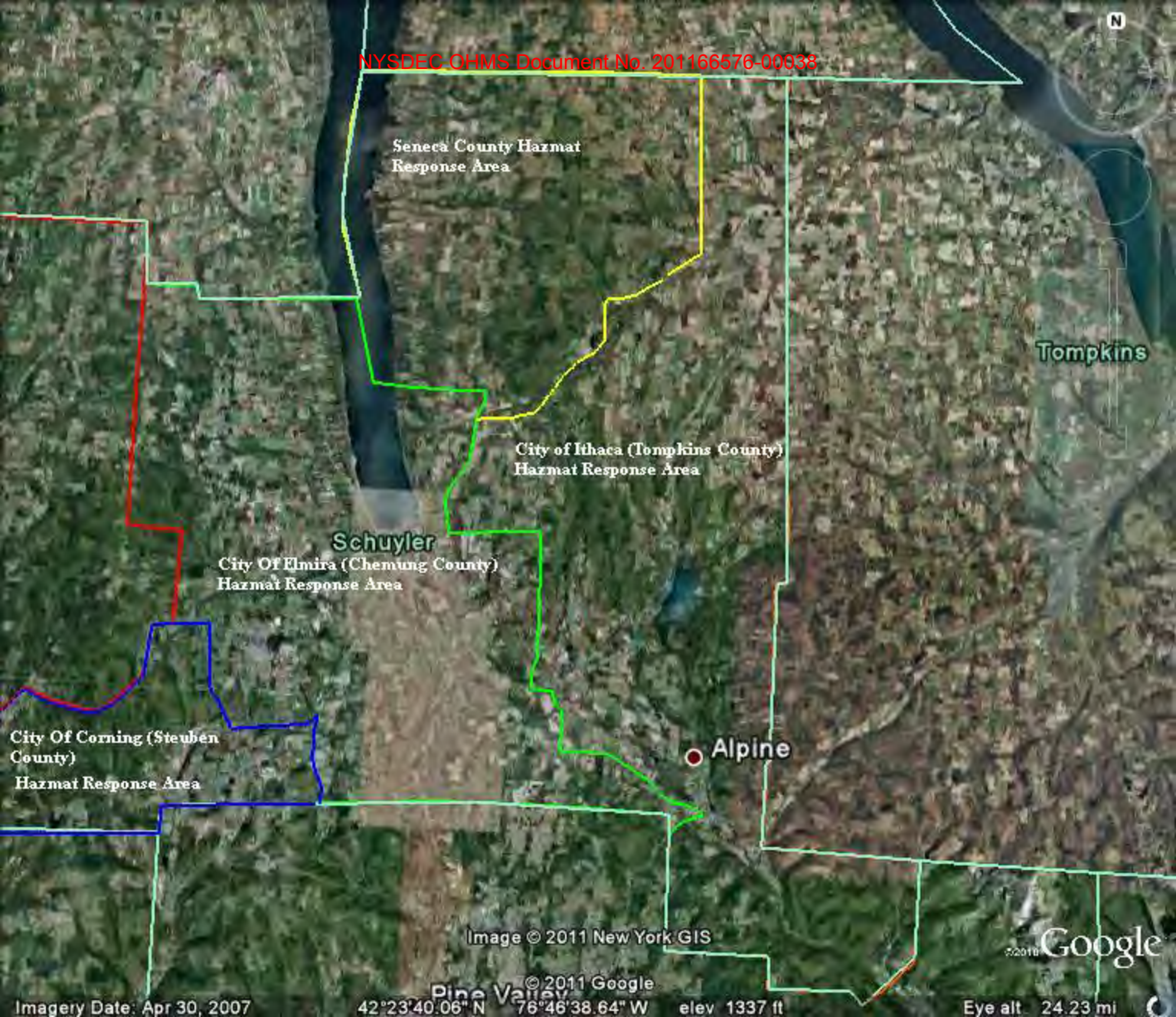
,

NYSDEC OHMS Document No. 201166576-00038

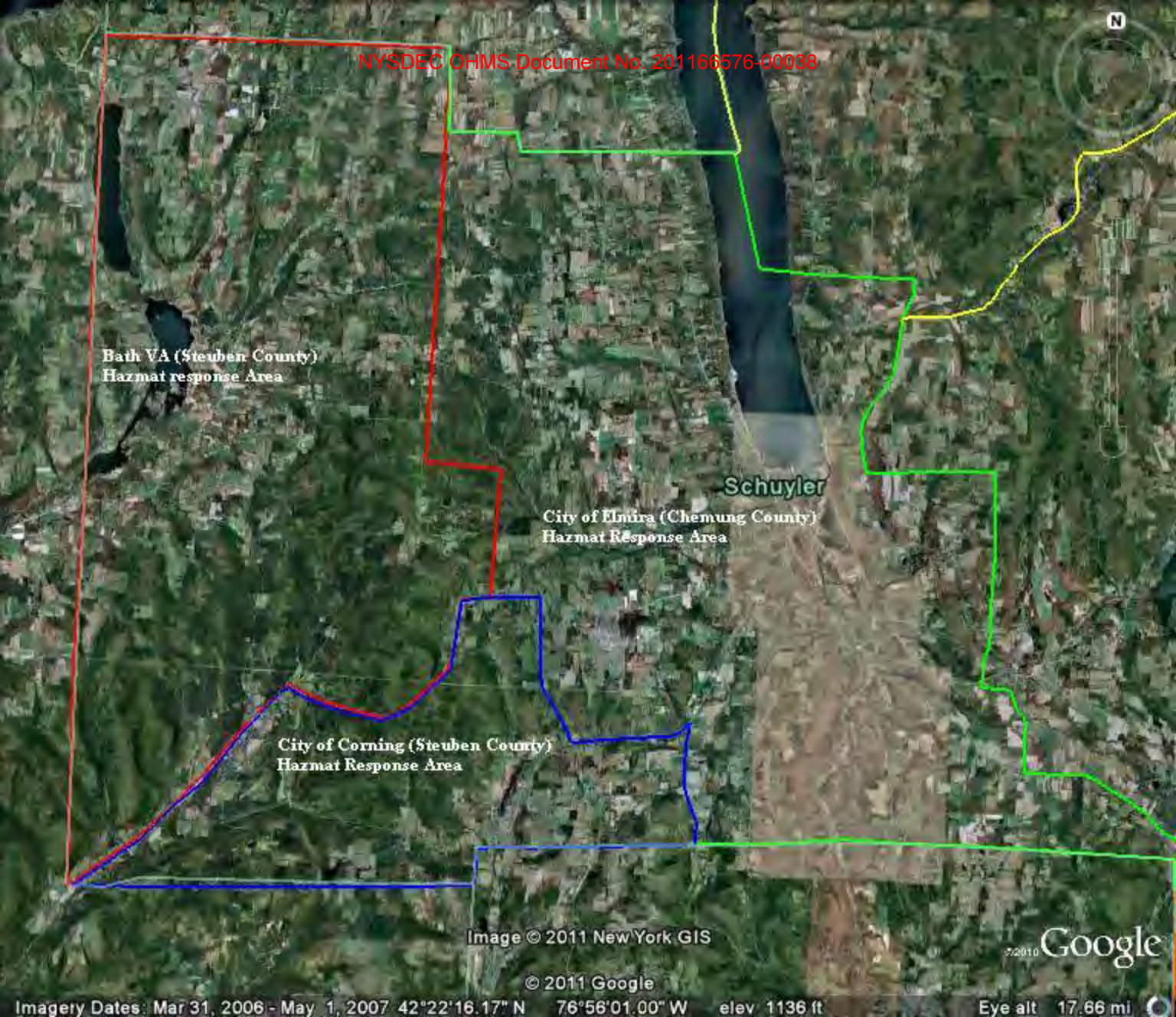
Appendix ‘B’

Hazardous Material Team Deployment Maps

NYSDEC OHMS Document No. 201166576-00038



NYSDEC OHMS Document No. 201166576-00038



NYSDEC OHMS Document No. 201166576-00038

Appendix 'C'

Schuyler County
Fire, Law Enforcement and Hazardous Materials Response Resources

NYSDEC OHMS Document No. 201166576-00038

Fire Service Resources:

Fire protection is provided by nine (9) all volunteer fire companies located within Schuyler County and five (5) all volunteer companies located in contiguous counties, whose districts extend into Schuyler County. For reference purposes, those departments are:

Schuyler County Fire Departments

Beaver Dams Volunteer Fire Department
Burdett Volunteer Fire Department
Mecklenburg Volunteer Fire Department
Monterey Volunteer Fire Department
Montour Falls Volunteer Fire Department
Odessa Volunteer Fire Department
Tyrone Volunteer Fire Department
Valois, Logan, Hector Volunteer Fire Department
Watkins Glen Volunteer Fire Department

Contiguous County Fire Departments

Dundee Volunteer Fire Department (Yates County)
Wayne Volunteer Fire Department (Steuben County)
Bradford Volunteer Fire Department (Steuben County)
Trumansburg Volunteer Fire Department (Tompkins County)
Erin Volunteer Fire Department (Chemung County)

Law Enforcements Services:

The following agencies provide law enforcement to areas within Schuyler County:

Watkins Glen Village Police Department
Schuyler County Sheriff's Department
New York State Police
New York State Park Police

Hazardous Materials Resources

Schuyler County is a member of the "Central New York Regional Hazardous Materials Response Consortium". The mission of this consortium is to collaboratively support hazardous materials preparedness, mitigation, response and recovery in member counties. Members of the consortium agree to provide personnel, resources and equipment to any other consortium member when requested and available. Resource requests to consortium members shall be initiated by the incident commander to the Schuyler County

NYSDEC OHMS Document No. 201166576-00038

911 center who will communicate the request to the 911 center(s) of the consortium member county(ies) holding the resources. (Refer to "NYS Fire Mobilization and Mutual Aid Plan") Examples of resources able to be obtained from consortium members may be, but are not limited to, hazardous materials response teams, personnel, subject matter experts, absorbent materials (ie. booms, pads, speedi-dry) foam concentrate, personal protective equipment, environmental monitoring equipment, or leak kits. For reference purposes, member counties of the Central New York Regional Hazardous Materials Response Consortium are:

- Cayuga County
- Chemung County
- Cortland County
- Ontario County
- Schuyler County
- Steuben County
- Tioga County
- Tompkins County

Additional specialized resources and/or hazardous materials teams may be obtained by contacting the following state and federal agencies:

New York State Police CCERT
New York State Office of Fire Prevention and Control
U.S. Dept. of Defense 2nd Weapons of Mass Destruction Civil Support Team

NYSDEC OHMS Document No. 201166576-00038

Appendix ‘D’

Hazardous Materials Clean-up Contractors

NYSDEC OHMS Document No. 201166576-00038

Remediation Contractors

Op-Tech Environmental Services
Corporate Headquarters
1 Adler Drive
East Syracuse, New York 13057
Phone (315) 437-2065
Fax (315) 437-6973

Clean Harbors Environmental Services Inc.
Syracuse Field Offices
6057 Corporate Circle
East Syracuse, New York 13057
Phone (315) 463-9901
Toll Free 800-645-8265
Fax (315) 463-9624

Miller Environmental Group
Albany Operations
105 South Albany Road
Selkirk, NY 12158
Office (518) 767-0285
Fax (518) 767-0289

T&R Towing
Bath (607) 776-7735
Hornell (607) 324-7735

NYSDEC OHMS Document No. 201166576-00038

Appendix ‘E’

Emergency Contact Numbers

NYSDEC OHMS Document No. 201166576-00038

Emergency Contact Numbers

Schuyler County

Legislative Chairman	Dennis Fagan	(w) 607-535-8100	(h) 607-292-3687
County Administrator	Timothy O'Hearn	(w) 607-535-8106	(c) 607-425-3912
County Sheriff	William Yessman	(w) 607-535-8222	(h) 607-546-4117
County EMO. Director	William Kennedy	(w) 607-535-8200	(c) 607-481-0525

New York State

New York State Emergency Communication Center (24 hour warning Point)	518-292-2200
Office of Emergency Management Region V	585-424-3196

Region V Director Dave Isbell (c) 315-420-3261 585-424-3196

U.S. Government

Federal Bureau of Investigation	Elmira Field Office	607-734-4541
	Buffalo Field Office	716-856-7800
Alcohol, Tobacco, & Firearms (ATF)	Buffalo Office	716-551-4048
	Enforcement	716-551-4041

Town/Village Officials

Town of Catherine	Supervisor	John VanSoest	(o) 607-594- 2273	(c) 607-220-6153
Town of Cayuta	Supervisor	David M. Reed	(o) 607-796-9558	
Town of Dix	Supervisor	Harold I. Russell	(o) 607-535-7973	(c) 607-481-8663
Town of Hector	Supervisor	Benjamin Dickens	(o) 607-546-5286 Ext 225	
Town of Montour	Supervisor	David Scott	(o) 607-535-9476	
Town of Orange	Supervisor	Jocelyn Harrison	(o) 607-962-2978	
Town of Reading	Supervisor	Marvin Switzer	(o) 607-535-7459 Ext 103	
Town of Tyrone	Supervisor	Donald DesRochers	(o) 607-292-3185	
Village of Burdett	Mayor	Dale Walter	(o) 607-546-4549	
Village of Montour	Mayor	John P. King	(h) 607-535-2445	
Village of Odessa	Mayor	Keith T. Pierce	(h) 607-592-7733	
Village of Watkins Glen	Mayor	Mark Swinnerton, Jr.	(c) 607-423-3321	

Local Media

Channel 18 (WETM) TV	607-733-5518	fax 607-733-4739
Channel 36 (WENY) TV	607-739-3636	fax 607-796-6171
WFLR Radio	607-243-7158	fax 607-243-7662
Star Gazette (Newspaper)	607-734-5151	fax 607-733-4408
The Corning Leader (Newspaper)	607-936-4651	fax 607-936-9939
Watkins Review and Express (Newspaper)	607-535-1500	fax 607-243-5833
The Odessa File (On-Line News)	publisher@odessafile.com	

NYSDEC OHMS Document No. 201166576-00038

Appendix ‘F’

Extremely Hazardous Substances

NYSDEC OHMS Document No. 201166576-00038

Section 303 of SARA Title III requires that information necessary for the development and implementation of a comprehensive emergency response plan be provided to local emergency planning committees. The Schuyler County Fire Coordinator shall annually collect emergency information from facilities utilizing chemicals listed under 40 CFR Part 355 Appendix "A". Information collected will be utilized in preparation of reports outlining release threat zone assessments, evacuation plans, and emergency notification plans. Reports generated for each covered facility shall be retained in this appendix and presented to the Schuyler County Local Emergency Planning Committee.

NYSDEC OHMS Document No. 201166576-00038

Date of Report_____

Facility Name_____

Company Name_____

Physical Address of Facility_____

Latitude_____ ___ Longitude_____

Local Description (Information to help locate facility _____

_____

_____

Facility Emergency Contact Name _____

Phone # (Business)_____

(Cell)_____

(Home)_____

e-mail address_____

Extremely Hazardous Substance Chemical Information

(As listed under 40 CFR Part 355 Appendix "A")

Chemical Name_____

CAS Number_____ UN#_____

Synonyms_____

Maximum Quantity_____ Average Quantity_____

Location within facility_____

NYSDEC OHMS Document No. 201166576-00038

Please attach a copy of the SDS (formerly MSDS) when submitting to the Schuyler County Fire Coordinator's Office.

Please give a description of how the chemicals listed on Page 1 are delivered to your facility. (Please include mode of transportation, originating point and transportation routes)

_____
_____
_____
_____
_____

Please describe your emergency notification procedure(s) in the event of a release. (Are there any automatic detection devices? Who do they notify? How will first responders be notified? How will the public be notified?)

_____
_____
_____
_____
_____

Are there any emergency control devices (ie. Remote closure valves, excess flow valves, etc.) Where are they located?

_____
_____
_____
_____
_____

Other information that may assist emergency responders in the event of a release.

_____
_____
_____
_____
_____

Please attach a floor plan designation chemical location, emergency control devices, entrances and exits.

NYSDEC OHMS Document No. 201166576-00038

Appendix 'G'

Transportation of Liquefied Petroleum Gas (LPG)

NYSDEC OHMS Document No. 201166576-00038

Schuyler County

Transportation of Liquefied Petroleum Gas LPG

NYSDEC OHMS Document No. 201166576-00038

NYSDEC OHMS Document No. 201166576-00038

Table of Contents

Scope Page 3

Overview Page 3

Characteristics of LPG Page 4

Modes of Transportation for LPG Page 5

- Pipeline Page 5
- Rail Transport Page 6
- Bulk Truck Page 6
- Bobtail Single-Tank Delivery Vehicle Page 7

Transportation Routes Page 10
- Pipeline Page 10
  - Map of Pipeline Page 11
- Railroads Page 11
  - Map of Railroads Page 12
- Highways Page 12
  - Map of Highways Page 13

Potential Transportation Related Incidents Page 13
- Pipeline Page 13
- Railroads Page 13
- Highways Page 14

Mitigation Strategies Page 14
- Pipeline Page 14
- Railroads Page 15
- Highways Page 15
- General Mitigation Strategies Page 15

Response Guidance Page 16
- Activation and Responsibilities Page 16
- Emergency Equipment Page 18
- Evacuation Routes and Procedures Page 18
- Training and Exercises Page 19
- Emergency Response Guide 115 Page 20
- Emergency Incident Log Page 22
- Firefighter Emergency Decision Tree vapor/leak Page 24
- Firefighter Emergency Decision Tree Fire Page 25
- Hazard Control Zones Page 26

Contact Informations Page 27

ALOHA Modeling of potential effected area

NYSDEC OHMS Document No. 201166576-00038

Example 1 Watkins Glen State Park Page 30
Example 2 Watkins Glen Franklin Street Page 32

Scope

This appendix to the Schuyler County Hazardous Materials Plan is to address the transportation incidents involving Hazardous Materials. All incidents shall be managed as outlined in the Schuyler County Hazardous Materials Plan. The focus shall be on Liquefied Petroleum Gas, (LPG). This appendix will look at characteristics of LPG, modes of transportation, transportation routes, potential incidents, mitigations strategies, and response guidance.

Overview

The Schuyler County Hazardous Materials Plan provides a management plan for emergencies involving the release of hazardous materials. This document serves as a coordination plan which defines the roles and responsibilities of various agencies, groups and individuals during such a declared emergency. This appendix will serve to provide more insight to the transportation of Hazardous Materials with emphasis on LPG transportation.

Many unknown products are transported through the county each and every day. The transportation of LPG is known to be transported through the county with greater amounts and frequency due to the fact of a storage and truck filling station located on State Route 14. There is a potential for increased quantity to be transported with the proposed storage and transportation depot located in the Town of Reading.

NYSDEC OHMS Document No. 201166576-00038

Characteristics of LPG

LPG is an acronym for Liquefied Petroleum Gas. There are a number of gases that fall under the "LPG" label, including propane, butane, propylene, butadiene, butylene and isobutylene, as well as mixtures of these gases.

LPG is a gas that can be compressed into a liquid. LPG is produced during natural gas processing and petroleum refining. LPG does not occur naturally. Following its refinement, LPG is stored as a liquid under pressure until its use at which time it becomes a gas or vapor.

Boiling Point: greater than -40 ° F at 760.0 mm Hg (USCG, 1999). It stays a liquid because it is under pressure in a gas cylinder. As a liquid it looks a lot like water. It is colorless and odorless in its natural state. The distinctive smell of LPG comes from an odorant that is added to LPG, for safety and leak detection reasons. Caution should always be used to avoid direct exposure, as a liquid LPG is cold enough to cause severe cold burns on exposed skin. Note: odorant is only added when product is distributed to the end user and not used in bulk transport of LPG.

LPG expands to 270 times the volume when it goes form liquid to gas.

Flame Temperature – An LPG flame burns at 1980°F

Flash Point: Propane: -156° F (cc); butane: -76° F (cc). (USCG, 1999)

Flammability Limits – The percentage of gas needed in a gas/air mixture to support combustion.

- Lower Explosive Limit (LEL): Propane: 2.2 %; butane: 1.8 % (USCG, 1999)
- Upper Explosive Limit (UEL): Propane: 9.5 %; butane: 8.4 % (USCG, 1999)

Auto ignition Temperature: Propane: 871° F; butane: 761° F (USCG, 1999)

Heat Value - According to NFPA 58, the Heating Value for Propane (vapor) is 2,488 BTU per standard cubic foot.

Vapor Pressure: greater than 1 atm (NIOSH, 2003)

Specific Gravity: 0.51 to 0.58 at -58.0 ° F (USCG, 1999)

Molecular Weight: greater than 44 (USCG, 1999)

Water Solubility: Insoluble (NIOSH, 2003)

IDLH: 2000 ppm (NIOSH, 2003)

NYSDEC OHMS Document No. 201166576-00038

Modes of Transportation for LPG

There are several modes for Transportation of LPG through Schuyler County.

Bulk shipments are done primarily through Pipeline in and out of the county. Trains and Trucks provide the other Bulk shipments. Bulk home delivery trucks travel on almost every road in the County. Small tank delivery trucks carry tanks under 100lbs for home and business delivery. Small cylinders like that used on back yard BBQ's are routinely carried in personal vehicles, beds of pick-ups, back seats of cars and trunks.

Pipelines

There are 20.9 miles of pipeline in Schuyler County carrying LPG.

Pipelines range in diameter from 6 to 42 inches with pressures from 300 to 1500 psi. Pipeline companies are responsible for the safety of pipelines, operating under a comprehensive series of regulations from construction to operation and maintenance. Federal and state pipeline inspectors evaluate whether operators are being diligent in meeting regulatory requirements, conducting proper inspections, and making necessary repairs. The following agencies provide oversight for the industry

- U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA)
- National Association of Pipeline Safety Representatives (NAPSR)
- U.S. National Transportation Safety Board

NYSDEC OHMS Document No. 201166576-00038

From 1999-2012, the number of spills from onshore liquid petroleum pipelines was reduced by about 62% while volumes spilled were reduced by about 47% based on reports from pipeline operators to the Pipeline Performance Tracking System, an industry pipeline release data base.

Rail Transport

Railroad tank cars are a principal means of moving bulk propane from refineries to bulk storage and disbursement facilities. The rail car is a large cargo tank on a rail car chassis, with capacities are between 11,000 and 34,500 gallons.

U.S. Department of Transportation Federal Railroad Administration has the enforcement authority and responsibility to ensure the safe transportation of hazardous materials.

U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration provide for the specifications for the construction of tank cars.

49 CFR C – Specifications for pressure tank cars (Classes DOT-105,109, 112, 114 and 120)

U.S. Department of Transportation classification is DOT 112 Pressure cars, uninsulated, no bottom openings.

NYSDEC OHMS Document No. 201166576-00038

Bulk Trucks

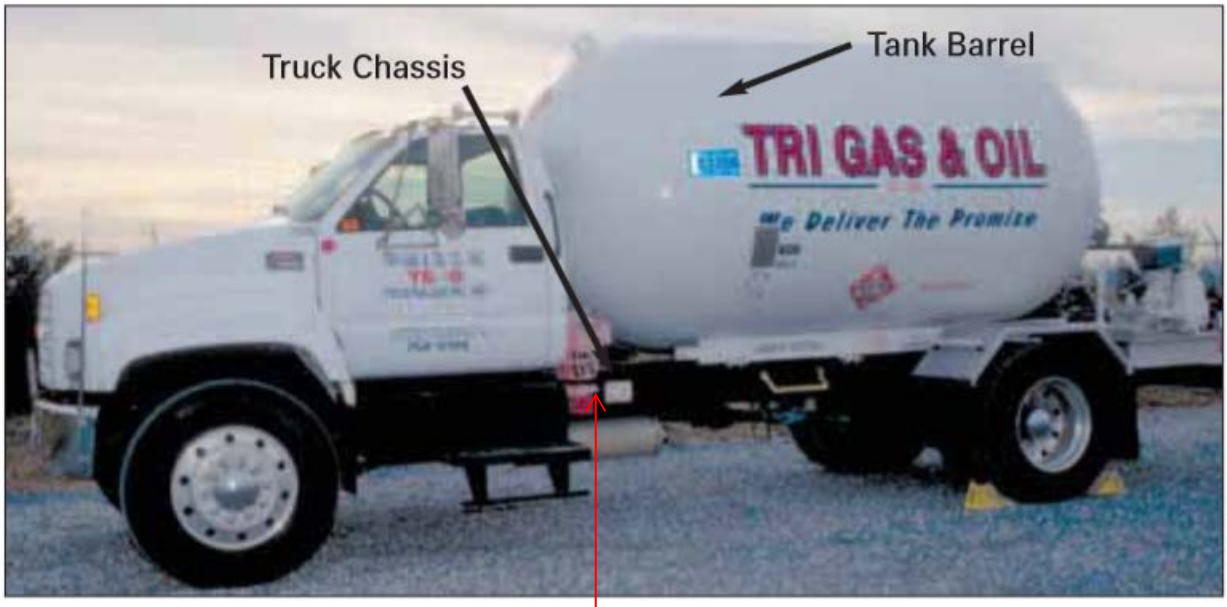
This section will provide an overview of the primary methods of transporting propane in bulk transportation vehicles and containers. Bulk propane vehicles are an integral element in the propane transportation and distribution system. Key elements of this system are (1) the bulk transport cargo tank truck, which primarily moves propane from production, storage, and distribution facilities to propane marketers, and (2) the bobtail delivery vehicle used by marketers to transport and deliver propane to the end user. Although there may be differences in the truck or trailer chassis to which the propane tank is attached (e.g., truck chassis, semi-trailer, etc.), there are virtually no differences in the fundamental design, construction, and safety features of the cargo tank itself. Cargo tank truck specifications are established and enforced by the U.S. Department of Transportation (DOT). Like DOT portable tanks, propane cargo tank trucks are built to strict design specifications and codes established by both the American Society of Mechanical Engineers (ASME) and DOT. Since 1967 propane cargo tanks have been constructed to the MC-331 cargo tank specification.

Semi-Trailer Unit —The bulk cargo tank trailer is one of the prime methods for delivering propane to bulk plants and marketing facilities. Tank capacities range from 9,000 to 14,500 gallons, although cargo tanks as large as 17,000 gallons may be found in some states (e.g., Michigan). Tandem cargo tank trucks or “pups” may also be found in certain parts of the United States. Federal and state vehicle weight limits—rather than volume restrictions— are the primary criteria for determining vehicle loads and capacities.

NYSDEC OHMS Document No. 201166576-00038

Bobtail Single-Tank Delivery Vehicle

The "workhorse" of the propane marketing business, it is used to transport and deliver fuel to customers who use propane containers that are filled onsite. Capacities can range from 750 to 6,500 gallons.



The other mode of propane movement is by that of portable tanks. LPG home delivery companies use Cylinder delivery vehicles to transport cy omer sites or retail stores. These companies follow strict safety standards

Emergency Shut off

The final mode of transportation is in private vehicles when cylinders are being transported to and from filling or to point of use site. Many small tanks are transported in personal vehicles unrestrained or lay

NYSDEC OHMS Document No. 201166576-00038

down. Private vehicle transportation also includes the tanks that are used with campers and motorhomes.

SAFETY FEATURES

Propane cargo tank trucks will have a number of safeguards, ranging from pressure relief valves and excess flow valves, to an emergency remote shut-off. These are outlined next.

Internal Safety Valves

—Each tank will usually be equipped with a cable or air actuated internal safety valve. However, the Flowmatic® valve is a pressure differential actuated valve and uses neither a cable nor air actuation to open. Since a propane cargo tank will contain both liquid and vapor propane, both a liquid and vapor valve will be found. This spring-actuated valve is normally closed and will require either cable activation or air pressure to a pneumatic actuator to remain open. In an emergency, the internal safety valve can be closed by manually actuating the remote emergency valve control or by heat actuating a fusible device and releasing tension on the cables or pressure on the air system.

The liquid internal safety valve is normally a 4 inch valve, while the vapor valve is typically a 2 inch valve. Many older vapor valves are 1-1/4 inch. Some propane cargo tanks may contain an additional exterior liquid loading fitting, which is connected to an internal “spray fill” at the top of the tank. Loading the liquid product through this spray fill helps to condense vapors in the tank back into liquid. Propane tanks

NYSDEC OHMS Document No. 201166576-00038

with this feature may have two liquid connections one designed for unloading and the other designed for loading. The vapor valve will be connected to an induction tube that extends into the vapor space of the container. It is important to recognize that if a propane cargo tank is overturned, the valves will now be reversed. That is—the liquid valve will now be in the "high" position and will function as the vapor valve, and vice-versa. If the cargo tank is resting on its side, both valves may be in the liquid or vapor space, depending upon the attitude/position of the cargo tank and the amount of product being transported. To assist with identification, some propane companies color-code these valves and their associated piping. Color-code schemes include orange (liquid) and yellow (vapor), and dark blue (liquid) and light blue (vapor). Color-coding is not universal. DOT regulations require that the internal safety valve be protected against mechanical stress and accident damage. As a result, the plug-type valve actually sits inside the cargo tank. Within four inches of the tank shell is a "shear cut" section of piping, which is designed to break under mechanical stress, such as when a vehicle goes under the cargo tank. This shear cut reduces the thickness of the piping by approximately 20%. If a collision causes stress at that point, the piping should fail at the shear point while the internal valve remains intact within the tank shell, thereby minimizing the release of liquid propane.

Transportation Routes

Any and all public and private roads have a potential for some transportation of LPG throughout the county. For the purpose of this plan we will only be looking at the routes used for bulk transportation.

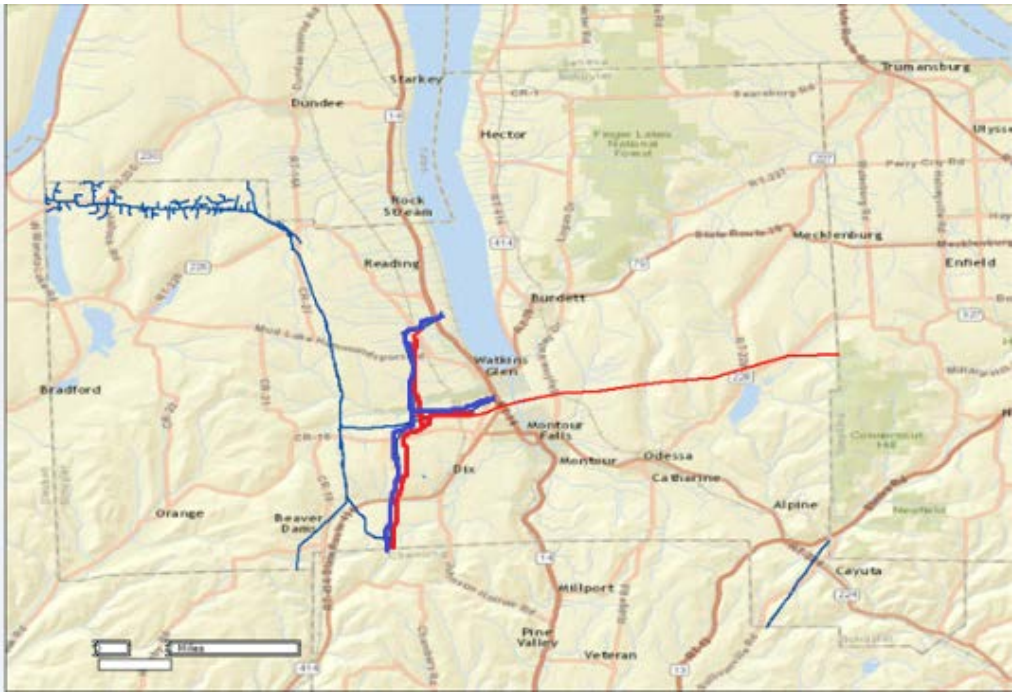
Pipeline

There are 20.9 miles of pipeline in carrying LPG.
There are 45 miles of pipeline carrying Natural Gas not including the gathering lines from the storage fields or distribution lines providing home delivery of Natural Gas.

Pipeline Operators in Schuyler County

- Arlington Storage Company
- Dominion Transmission
- Enterprise Products
- Columbia Gas Transmission
- Empire Pipeline

NYSDEC OHMS Document No. 201166576-00038



Map of pipelines in Red – LPG Blue - Natural Gas

Natural Gas pipelines are used to transport Natural Gas to storage in Schuyler County as well as a means to move product to destinations beyond the county line. There is several gas wells located in Schuyler County that us small gathering lines to bring gas to compressor stations that route the gas into the larger pipeline infrastructure. Natural Gas is delivered to Schuyler County for storage in the town of Tyrone where it is stored in depleted gas wells. It is also stored in salt caverns in the town of Reading. Natural Gas is routed by pipeline from storage to distribution systems throughout the Northeast.

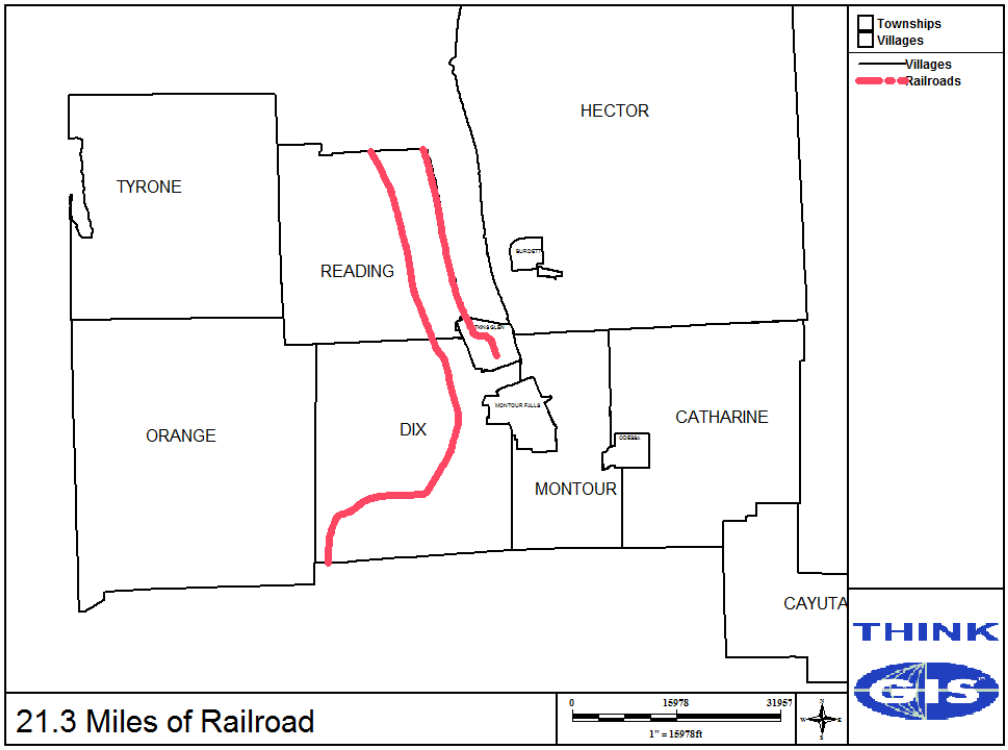
LPG is delivered to Schuyler County for storage in at the Enterprise facility in the town of Reading. From the storage facility LPG is shipped by pipeline and by bulk cargo tank trailers to retail distributors.

Railroads

Schuyler County has one rail line that transverses the county from south to north, with a spur that starts in Himrod, Yates County and travels down along Seneca Lake to the village of Watkins Glen. The primary commodity that is transported on the spur is Salt. On the main line various commodities are transported through the county including hazardous materials Ethanol and Propane.

NYSDEC OHMS Document No. 201166576-00038

Norfolk Southern Corporation operating the rail that transverses the county north to south while Finger Lakes Railway operates the spur that descends into Watkins Glen from Himrod.



Highways

Bulk LPG is transported through Schuyler County on a daily basis. Bulk cargo tank trailers are loaded at the Enterprise facility in the town of Reading for transport to retail distributors throughout the region. According to Enterprise, approximately half of the transports head north out of the facility, the other half head south.

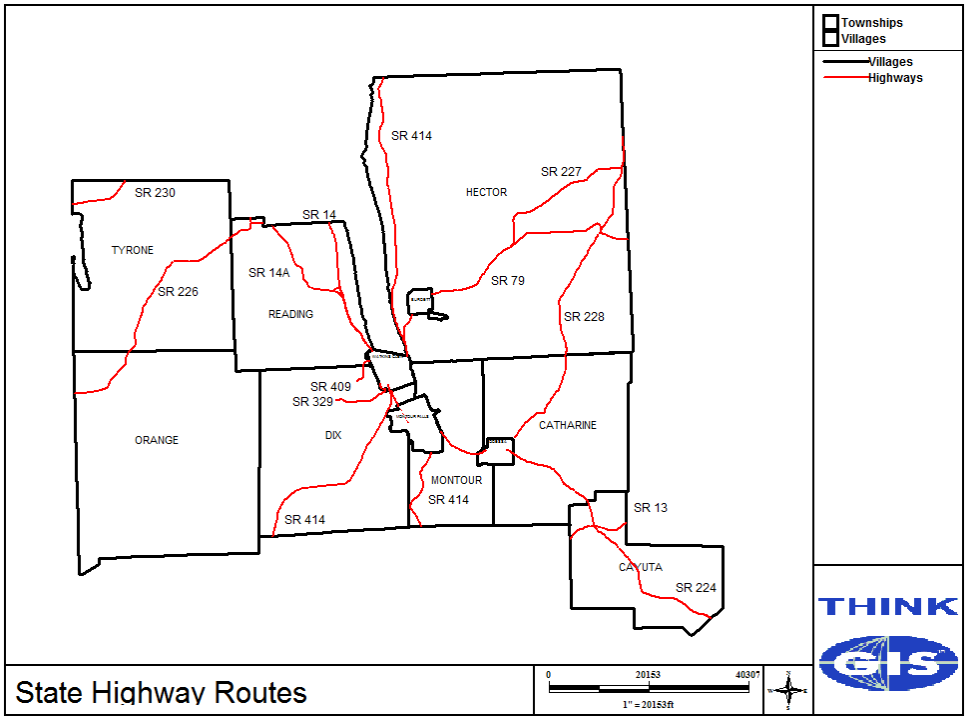
There are an approximately 100 miles of State highways in Schuyler County. The primary routes used to transport LPG from the storage facility in Reading are:

State Route 14 North to county line - 3.6 miles
State Route 14 N to 14A to county line - 6 miles
State Route 14 N to 14A to 226 South to county line - 16.2 miles
State Route 14 South to county line - 10 miles
State Route 14 S to 224 South to county line - 20 miles

NYSDEC OHMS Document No. 201166576-00038

State Route 14 S to 414 South to county line – 11.5 miles

There are 67.3 miles of highways used as primary routes to transport LPG from the Storage facility to retail distribution centers. Approximately half of all transport trucks are only using 6 miles or less when leaving the storage facility.



Potential Transportation Related Incidents

Pipelines: Since 1986 the pipeline incidents causing death or major injuries have declined. The long term trend is an average decline of 10 percent every three years. Pipeline incidents can be caused by a number of factors including corrosion, equipment failure, as well as damage from excavations, incorrect operation, and natural forces. Currently available data covers the period from 1991 through 2011.

Historically, excavation damage is the leading cause of most serious pipeline failures. Accident information is grouped into eight cause categories: excavation damage, corrosion, natural forces, other outside force damage, material or welds, equipment, incorrect operations, and other.

NYSDEC OHMS Document No. 201166576-00038

The main hazard from a pipeline is the loss of containment leading to a product leak, fire, explosion and asphyxiation. The variables that affect the impact of a breach include: size of pipe, size of breach, line pressure, weather, ignition source and location. Location along the pipeline has a very significant effect as to the impact of an incident, including accessibility, terrain, proximity to buildings and the population within the area.

Railroads: Railroads have a strong record for safely moving hazardous materials (hazmat), with 99.998 percent of all shipments reaching their destination without a release caused by an accident. Railroads have lowered hazmat accident rates by 91 percent since 1980, and 38 percent since 2000.

The movement of hazardous materials is highly regulated, involves specialized employee and local first responder training, and is done with the utmost care to reduce safety and security risks.

The federal government has comprehensive regulations covering the safety and security of the movement of hazmat by rail – including the Federal Railroad Administration (FRA), Pipeline and Hazardous Materials Safety Administration (PHMSA) and Transportation Security Administration (TSA). The federal government also directs railroads to route hazardous materials on lines posing the least overall safety and security risk, and identifies the risk factors railroads should take into account in determining the best routes.

The potential incidents related to rail transport of LPG include: derailment that can cause leaking product, vapor clouds, fire, and explosions. Fire impinging on other tank cars can cause a boiling liquid expanding vapor explosion (BLEVE). Other potential incidents would include leaking product, and over pressurization of a tank car.

Potential causes to train derailments: Poor and improper maintenance of tracks, collisions with other trains, collisions with vehicles at crossings, excessive speed of trains, mechanical failures of train engines or rail cars and poor weather conditions.

NYSDEC OHMS Document No. 201166576-00038

Highways: Trucks that carry LPG are specifically designed to survive a rollover crash, even with the truck design the potential for an accident to cause a leak of product, vapor clouds, fire, and explosions. The impact of a crash is dependent on location, weather and population proximate to crash site.

Factors that contribute to or cause motor vehicle crashes: Drive fatigue, speeding, drive unfamiliar with area, weather, mechanical failure, and other drivers. Highway routes, design and type of construction can play a role in highways' vulnerability to crashes.

Mitigation Strategies:

Mitigation is the effort to reduce loss of life and property by lessening the impact of disasters.

Pipeline Hazard Mitigation Strategies:

Federal pipeline safety regulations 49 CFR 192.616 and 49 CFR 195.440 require pipeline operators to develop and implement public awareness programs that follow the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162, "Public Awareness Programs for Pipeline Operators"

- Pipeline awareness - education and outreach, pipeline operators must provide the affected public, fire, police, and other public officials with information about how to recognize, respond to, and report pipeline emergencies.
- Excavation damage prevention and the importance of using the one-call (811) notification system prior to excavation are to be emphasized for all stakeholders.
- Land use and development planning near transmission pipelines is an area in which local governments can implement mitigation relief to pipeline hazards is the adoption of risk-informed planning for land use and development near pipelines.
- Emergency response planning for pipeline emergencies.
- Affected municipalities, school districts, businesses, and residents must be advised of pipeline locations.

Railroad Hazard Mitigation Strategies:

- Rail inspections: The Federal Track Safety Standards require railroads to regularly inspect track conditions, and to also conduct separate rail inspections with specially equipped hi-rail motor vehicles that operate over rail tracks. This equipment employs ultrasonic technology to identify internal rail defects that could potentially lead to an accident. Data is collected in real-time.
- Speed limit: the speed limit on the track through Schuyler County is 25 MPH.
- Educational outreach to increase awareness about grade crossing safety.
- Enforcement of trespass violations on railroad property. (Law Enforcement should strictly enforce)

NYSDEC OHMS Document No. 201166576-00038

- Railroads are required to implement a bridge management program to include at least annual inspections of railroad bridges to be conducted under the direct supervision of a designated railroad inspector.

Highway Mitigation Strategies:

- Hazardous Materials drivers are credentialed to higher safety standards than other operators
- State route 414 has a weight restriction of 9 tons for trucks coming north into the village of Watkins Glen (Law Enforcement should strictly enforce)
- State route 224 has a mandatory brake check at the top of the hill prior to descending the hill into the village of Montour Falls (Law Enforcement should strictly enforce)
- State route 14 has two staged speed reduction prior to entering the village of Watkins Glen from the north and South (Law Enforcement should strictly enforce)
- DOT regulations require that MC-311 cargo tanks must be visually inspected and leak tested by a registered DOT approved inspector on an annual basis

General Incident Mitigation Strategies:

- Promote use of Emergency Notification systems
  - NY-Alert all county
  - Ping4 alerts all county
  - Code Red Village of Watkins Glen
- Enhance the emergency radio communication system
  - The after action report from every incident includes the need for better communication of first responders: Schuyler County is currently upgrading the emergency communication system to enhance the ability to alert responders and their ability to manage incidents.
- Recommended advanced training for responders
  - Flammable Gas Emergency Response Workshop
  - Cargo Truck Hazardous Materials Specialist
  - ICS to the 300 level

- Preplans for potential incidents should be in place.
  - All Fire Departments in Schuyler County have Pre-determined 2nd alarms set up based on the location within their district
  - Schuyler County Fire Departments have automatic mutual aid established

Response Guidance:

NYSDEC OHMS Document No. 201166576-00038

The primary responsibility for responding to emergencies rests with the local governments of town's villages and cities, and with their Chief Executive.

As mandated by federal statue, all hazardous materials incidents within Schuyler County shall be managed by utilizing the National Incident Management System (NIMS) – Incident Command System (ICS).

Any and all response shall be in accordance with the Authority Having Jurisdiction (AHJ) polices procedures and plans.

All incidents shall be managed as outlined in the Schuyler County Hazardous Materials Plan.

Emergency Responders should follow the Emergency Response Guidebook (ERG). Emergency Response Guidebook provides first responders with a go-to manual to help deal with hazmat accidents during the critical first 30 minutes

- ERG's should be in all emergency services vehicle
- **ERG 2012 Mobile App**
  The Pipeline and Hazardous Materials Safety Administration has developed a free, mobile web app of its Emergency Response Guidebook 2012 (ERG). The new safety tool provides the nation's emergency responders with fast, easily accessible information to help them manage hazardous material incidents. For more information visit http://phmsa.dot.gov/hazmat/library/erg

  Propane uses Guide 115

Activation and Responsibilities

Schuyler County 911 center will notify the Fire Department that has jurisdiction of the location of the incident.

Fire Department Responsibilities
Upon arrival the officer of the first arriving units shall assume the duties of the incident commander (IC) until relieved by the arrival of a more senior ranking officer.

- The IC shall implement the local hazardous materials response plan and has the initial responsibility for initial assessment of the situation, identification of materials involved, incident coordination, securing the site, rescue and medical treatment of the injured if safe to do so, defensive measures or containment if properly trained to do so, and/or evacuation of people if endangered.

Police Agencies Responsibilities

NYSDEC OHMS Document No. 201166576-00038

The appropriate police agency, having jurisdiction, in addition to the responsibilities they have at the scene of transportation incidents, they shall assist the incident commander in carrying out the following tasks which shall include but not limited to:

- Set up and maintain exclusionary zones, maintaining access and egress for emergency response personnel
- Provide security on-scene for emergency response operations
- Control and contain crowds
- Assist in evacuation the area surrounding the site of the incident, if appropriate, sufficient to protect the public from the dangers posed by the substance.
- Assist with perimeter control as needed

Fire Coordinators Office Responsibilities

The responsibilities shall include but are not limited to:

- Coordinate with other agencies to ensure that when there is an incident the hazardous material will be contained and controlled and the incident is handled in a manner that will minimize hazards to the populations of the county.
- Maintain participation in the Central NY Hazmat Consortium to lavage regional assets in planning and response to incident.
- Establish and serve as a liaison with the New York State Office of Fire Prevention and Control.

Emergency Management Office Responsibilities

The responsibilities shall include but are not limited to:

- The EMO acts as principal aide to, and may be delegated authority to act for, the Chairman of the Schuyler County Legislature. The EMO coordinates all activities with county departments and other agencies and organizations so to keep the chairman apprised of the current situation. Periodic briefings will be held to include county departments and other agencies as required.
- The EMO shall coordinate operating departments of the government with non-governmental groups and emergency organizations.
- The EMO shall maintain continuous coordination with the New York State Office of Emergency Management (OEM) and with other governmental agencies as needed.

Chief Elected Official Responsibilities

The Chief Elected Official shall be duly elected official of a political jurisdiction, or his/her designated successor, as defined by the jurisdictions policies.

The Chief Elected Official's responsibilities include but are not limited to:

NYSDEC OHMS Document No. 201166576-00038

- Declare state of emergency when needed in accordance with New York State Executive Law 2B
- Provide the public with information related to the incident in conjunction with the public information officer.

Emergency Equipment

Standard structural firefighting equipment is required to control incidents that involve LPG. All fire departments in Schuyler County possess the equipment needed. The size of the incident may require the use of mutual aid to assist the primary response agency with the control of an incident.

Some of the equipment need include but are not limited to:

- Master stream with a Deluge gun or Fire monitor
- Large diameter hose (5 inch hose is standard can supply 1000 GPM)
- Tanker trucks
- Structural Firefighting PPE
- SCBA's
- Air Monitoring equipment
- Communication equipment

Evacuation Routes and Procedures

The precise evacuation zone and route used to address a transportation incident will vary by a multitude of factors surrounding the incident such as location, weather, time, amount or size and type of incident, i.e. leak, fire, etc.

- In the event that the evacuation of residents of the area surrounding the emergency scene is necessary, the evacuation order will be issued by the Incident Commander unless a State of Emergency has been declared, in which case the order shall be issued by the Local Chief Executive.
- Notification to the public will be made using one or more of the following systems Ping4 alerts, NY-Alert reverse 911, social media, door to door canvassing as appropriate, mobile public address systems, EAS broadcasts and radio and television broadcasts, Code Red (village of Watkins Glen only).
- Evacuation routes shall be selected to avoid exposure to the hazard.
- In the event that large numbers of individuals must be evacuated, notification will be made to the American Red Cross.

Training and Exercise

NYSDEC OHMS Document No. 201166576-00038

Training requirements are the responsibility of the local authority having jurisdiction, and all responders shall follow their agencies policies and procedures.

Hazardous Materials First Responder Operations is included in the initial Firefighter 1 course meeting training requirement of OSHA 1910.120 for first responders. There are several advance courses that prepares emergency response personnel to effectively and safely respond to and stabilize incidents involving hazardous materials.

The following are additional trainings that are available including but not limited to:

- Flammable Gas Emergency Response Workshop
- Hazardous Materials Incident Command
- Hazardous Materials Incident Safety Officer
- ICS 200 & 300
- Hazardous Materials Technician – Basic

All responders are required to annually review and refresh the competencies covered in OSHA 1910.120 HAZWOPER for First Responder Awareness and Operations Level Responders.

Schuyler County Exercise program requires EMO participate in a minimum of 3 exercises per year. All exercises conducted must be managed and executed in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP). An After-Action Report/Improvement Plan (AAR/IP) must be prepared and submitted to DHSES following every exercise, regardless of type or scope.

NYSDEC OHMS Document No. 201166576-00038

GUIDE 115 GASES - FLAMMABLE (Including Refrigerated Liquids)

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- **EXTREMELY FLAMMABLE.**
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.

CAUTION: Hydrogen (UN1049), Deuterium (UN1957), Hydrogen, refrigerated liquid (UN1966) and Methane (UN1971) are lighter than air and will rise. Hydrogen and Deuterium fires are difficult to detect since they burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)

- Vapors may travel to source of ignition and flash back.
- Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

HEALTH

- Vapors may cause dizziness or asphyxiation without warning.
- Some may be irritating if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

PUBLIC SAFETY

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 800 meters (1/2 mile).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

NYSDEC OHMS Document No. 201166576-00038

EMERGENCY RESPONSE

FIRE

- **DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.**

CAUTION: Hydrogen (UN1049), Deuterium (UN1957) and Hydrogen, refrigerated liquid (UN1966) burn with an invisible flame. Hydrogen and Methane mixture, compressed (UN2034) may burn with an invisible flame.

Small Fire

- Dry chemical or CO_2.

Large Fire

- Water spray or fog.
- Move containers from fire area if you can do it without risk.

Fire involving Tanks

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- Prevent spreading of vapors through sewers, ventilation systems and confined areas.
- Isolate area until gas has dispersed.

CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

FIRST AID

- Move victim to fresh air.
- Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

NYSDEC OHMS Document No. 201166576-00038

Emergency Incident Log

CALL TIMES: Initial Call _____ Time of Incident _____

Time at Scene _____

Chemtrec Called _____

Shipper to Scene _____

CALLER: NAME/ORGANIZATION/NUMBER _____

INCIDENT PROBLEM: Type Incident _____

Time _____

Details/Injuries _____

Incident Stage _____

PRODUCTS/EQUIPMENT INVOLVED: Equipment _____

Quantity _____

Plant _____

LOCATION: City/State _____

Directions _____

POTENTIAL LOSSES: Populated Area _____

Rural Area _____

Industrial Area _____

MODIFYING CONDITIONS: Weather _____

Temperature _____

Nearest Airport _____

CONTROL PERSONNEL ON SCENE:(or called)

Fire/Units _____ Police _____

NYSDEC OHMS Document No. 201166576-00038

OTHER _____

CONTROL EQUIPMENT: Wreckers, Crane, Straps, Air Bags, Etc. _____

_____

SHIPPER: Carrier - Name & Type _____

Rail Car - Owner/Lease-holder, Number & Size _____

_____

Consignee _____

Origin/Destination _____

B/L - Waybill Number _____

COMPANIES CALLED: Telephone Number _____

Person(s) Contacted _____

AGENCIES CALLED: CHEMTREC (1-800-424-9300) _____

NTSB (202-314-6120 _____

FRA (202-426-2748) _____

BOE (202-835-9500) _____

DOT/MTB (202-426-0656) _____

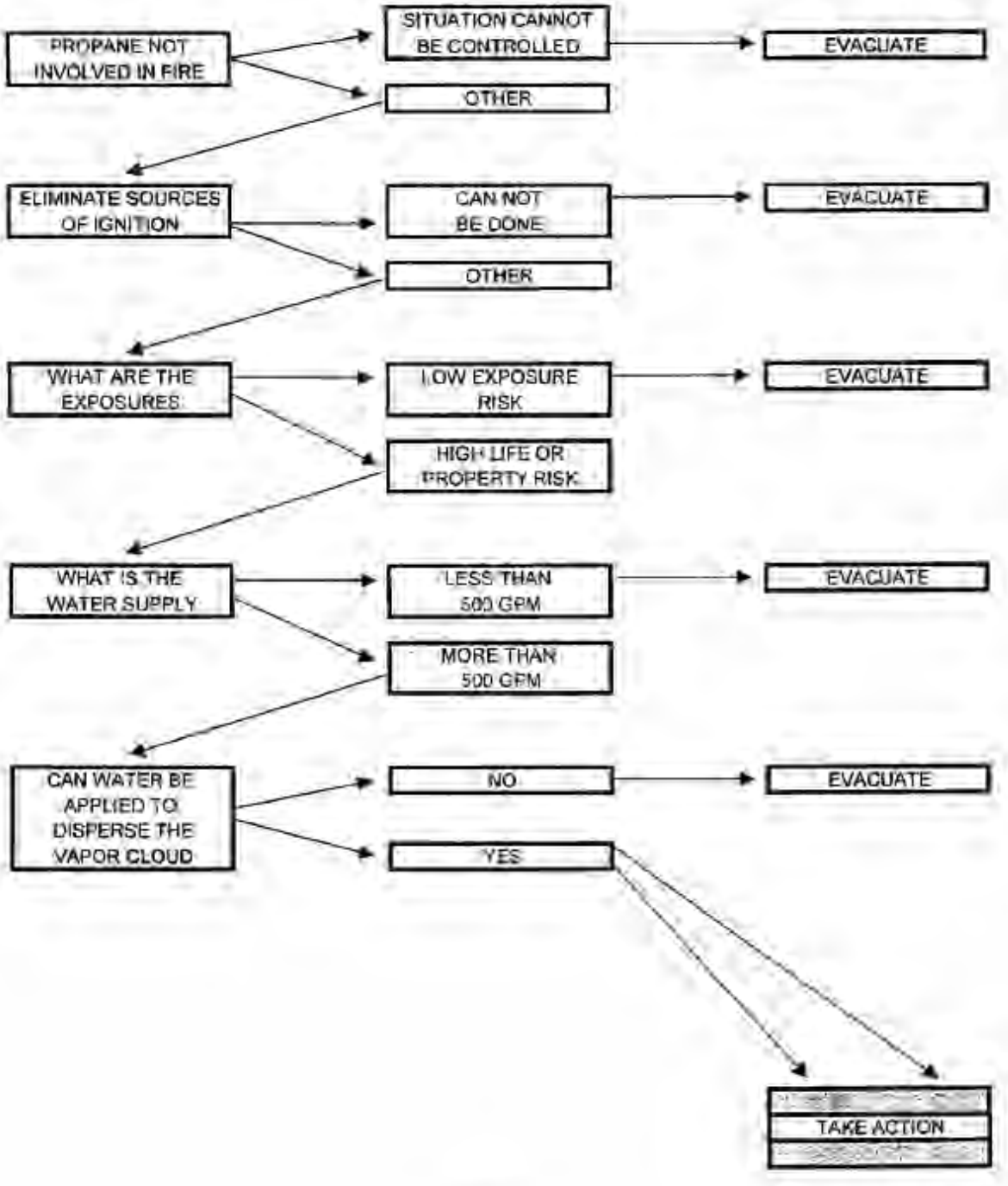
FHA (202-426-1700) _____

Other _____

NYSDEC OHMS Document No. 201166576-00038

Fire Fighter Emergency Response Decision Tree

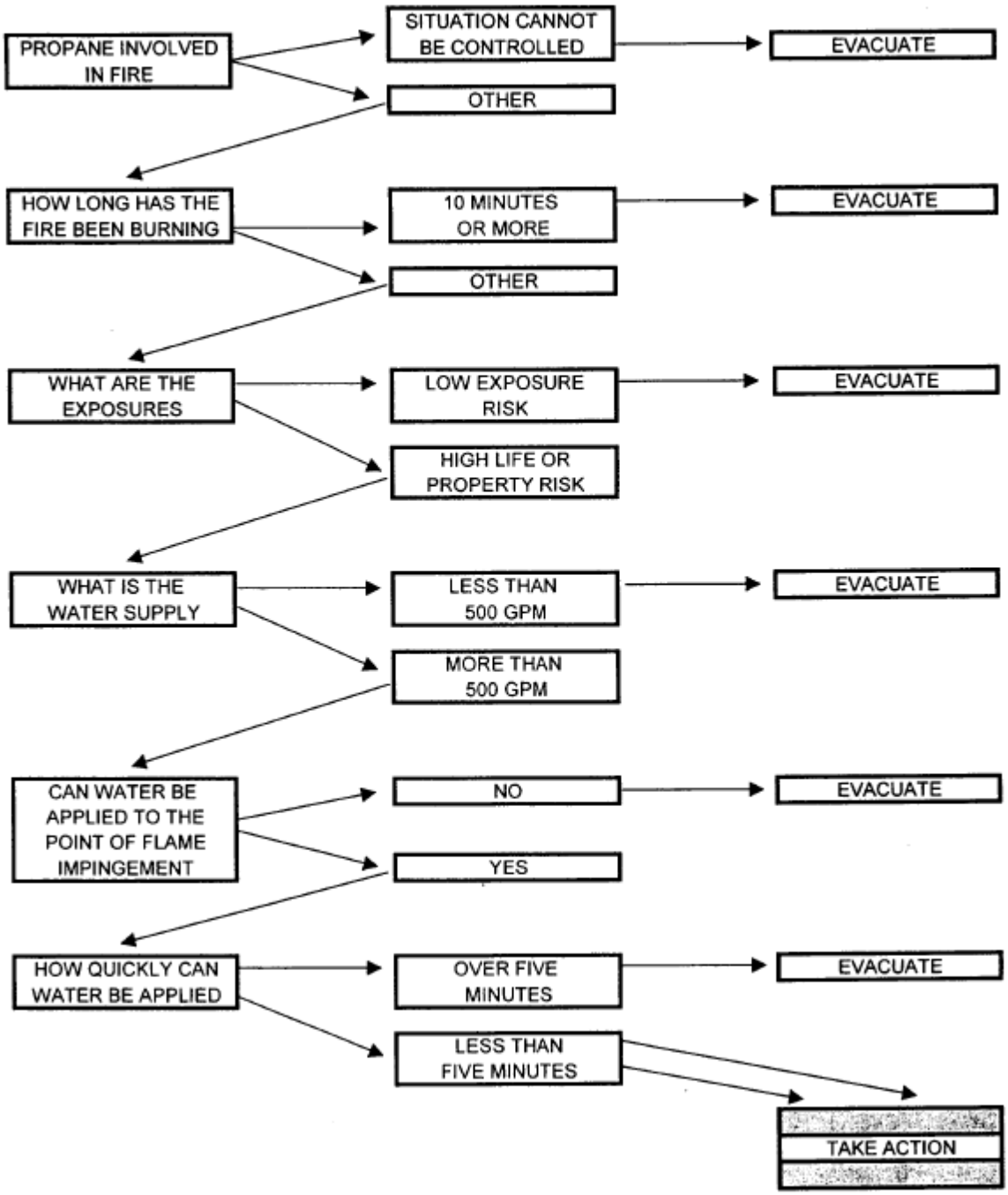
Propane Vapor Leak & Control



NYSDEC OHMS Document No. 201166576-00038

Fire Fighter Emergency Response Decision Tree

Propane Involved in Fire

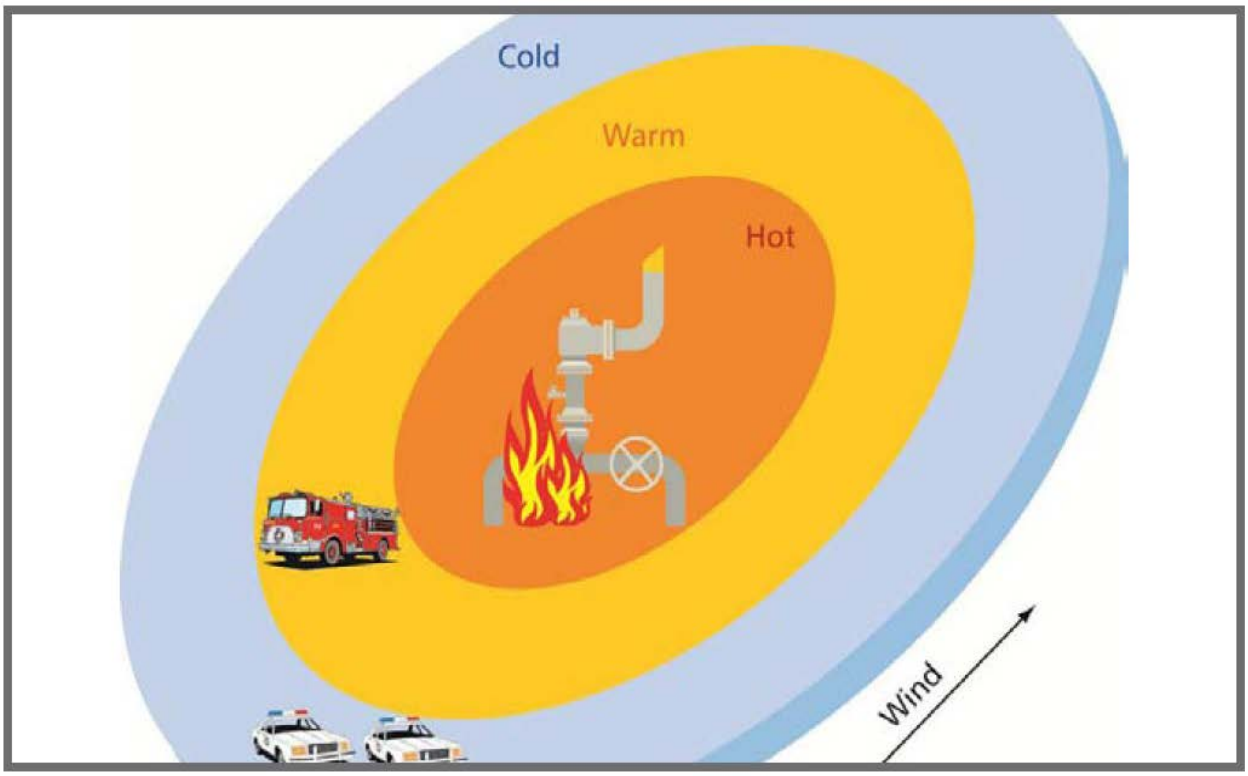


NYSDEC OHMS Document No. 201166576-00038

Emergency Response Tactics: Establishment of Hazard Control Zones

Isolation of the area surrounding a hazardous materials incident is a critical step to protect responders and the public. There are numerous factors that affect establishment of Hazard Control Zones. The diameter of the Hot Zone is large enough to protect persons from exposure to the harmful effects of the hazardous materials.

- The Hot Zone or "Exclusion Zone" contains a hazardous material with a potentially serious rich. Entry into the Hot Zone is only by responderss wearing protective equipment, and clothing appropriate for the hazards based on a thorough risk assessment.
- The Warm Zone or "Contamination Reduction Zone" adjoins the Hot Zone and serves as an area for decontamination of response personnel and equipment.
- The Cold Zone, or "Support Zone" borders the Warm Xones and contains support activities for the response which do not require personal protective equipment such as the Command Post, equipment donning and doffing areas, rehabilitation and treatment funtions, and staging area



NYSDEC OHMS Document No. 201166576-00038

Emergency Contact information	**Emergency**	**Non-emergency**
Schuyler County Emergency Services (all police, fire, & EMS)	911	607-535-8222
Schuyler County Emergency Management	911	607-535-8200
New York State Watch Center		
(Emergency Contact for all State Agencies)	518-292-2200	
DEC Spill Hotline	800-457-7362	
National Response Center	800-424-8802	
Enterprise Products	888-883-6308	888-806-8152
Columbia Gas Transmission	800-835-7191	607-243-8160
Crestwood	866-243-7473	817-339-5570
Empire Pipeline	800-444-3130	716-686-6123
Arlington Storage Company LLC	877-689-0195	817-339-5570
Dominion Transmission	888-264-8240	800-362-7557
New York State Propane Gas Association		518-383-3823
Finger Lakes Railway		315-781-1234
Norfolk Southern	800-453-2530	855-667-3655
Propane Retailers Serving Schuyler County		
Ferrellgas		800-437-4856
Griffith Energy - Lodi, NY		607-582-6707
Bath, NY		607-776-2145
Big Flats, NY		607-562-8451
AmeriGas		888-727-7171
Suburban Propane		800-776-7263
DiSanto Propane		800-776-8192
Ira Wyman		315-536-2378
Phelps Sungas		315-789-3285
Ehrhart Propane & Oil		607-987-8111
Midway Propane		607-243-7885

NYSDEC OHMS Document No. 201166576-00038

C.H.I.T.

Chemical Hazard Information Team

Contact Listing

CHIT Member	Phones		
	Home	Work	Cell
Joe Bird 208 W. Mill St. Horseheads, NY 14840	796-9555	535-2721 xt 201	425-5357
Michael Bowles 410 Euclid Ave. Elmira, NY 14905	201-8064	378-1419	215-2369
Sharon Burke 1657 Dachshund Dr. Corning, NY 14830	524-6416	814-628-6065	227-7152
Carol Christian 73 Carpenter Rd. Elmira, NY 14903-7930	562-8253		
Brenda L. Coolbaugh 525 W.2nd Street Elmira, NY 14901-2645	254-5085	592-7069	
Benjamin L. Hall 4272 Hornby Rd. Corning, NY 14830	937-9643	974-0416	738-6798
Reeve B. Howland 1415 W. Water St. Elmira, NY 14905	732-5844	737-8220	738-0003 857-5596
David Jessick 1113 N. Main St. Elmira, NY 14901	733-0988	retired	426-7962
Chad M. Kehoe	524-6736	732-2214	(585)755-2251

NYSDEC OHMS Document No. 201166576-00038

231 McCarthy Rd.
Lindley, NY 14858

Merrill Lynn 16 Olcott Rd. Big Flats, NY 14814	562-8019		
	Home	Work	Cell
Deb Marlatt 1110 Cty. Road 85 Addison, NY 14801	359-3510		259-7882
Caroline Masia 99 Morningside Dr.. Elmira, NY 14905	846-0887(C)	732-2909	846-0887
Dale Powers 4708 Clawson Drive. Campbell, NY 14821	527-1027	974-3451	329-5307
Bill Pratt 305 Watkins Rd. Horseheads, NY 14845	739-2069		481-3869
John Short 1244 Trescott Dr. Pine City, NY 14871	732-7735	732-2909	731-1163
Brian Tyndell 10 Maple Ave Addison, NY 14801	359-4708		769-3841
Rob Winkky 252 W 19th St. Elmira Heights, NY 14903	732-1712	732-2909	425-8053

NYSDEC OHMS Document No. 201166576-00038

NYSDEC OHMS Document No. 201166576-00038

Potential Areas Affected by a Release –

Any area within the transportation system has the potential to be affected by a release.

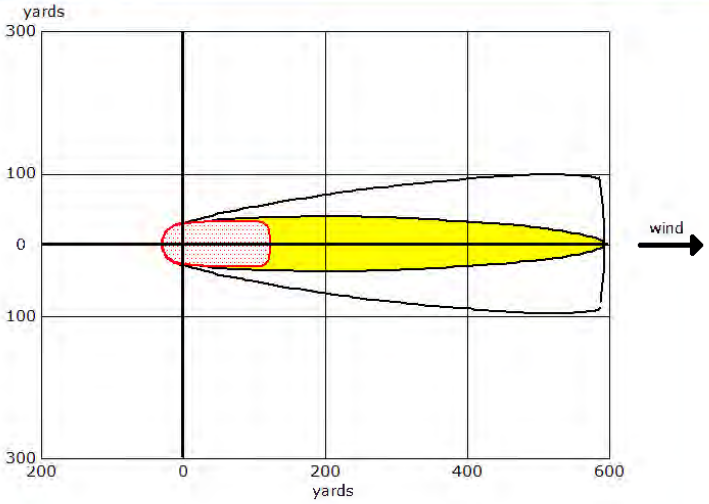
For planning purposes we looked two areas that could have the greatest impact should a transportation related incident occur.

Using computer modeling ALOHA software with overlays onto a Google map we run the following Flammable Threat Zones.

Example 1: Rail Tanker that would derail and fall into the Watkins Glen State Park

NYSDEC OHMS Document No. 201166576-00038

Flammable Threat Zone

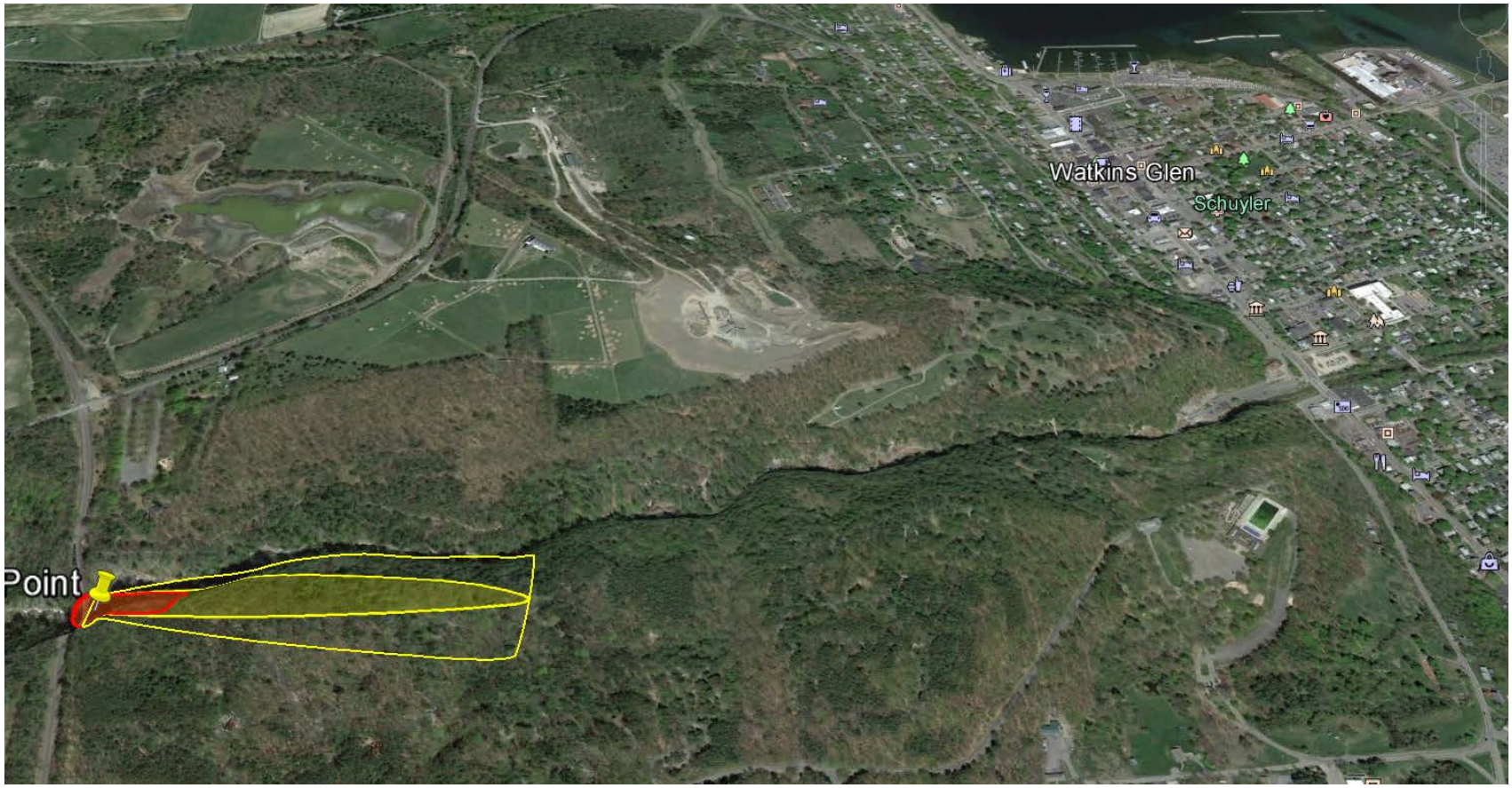


greater than 12600 ppm (60% LEL = Flame Pockets)
greater than 2100 ppm (10% LEL)
wind direction confidence lines

Text Summary

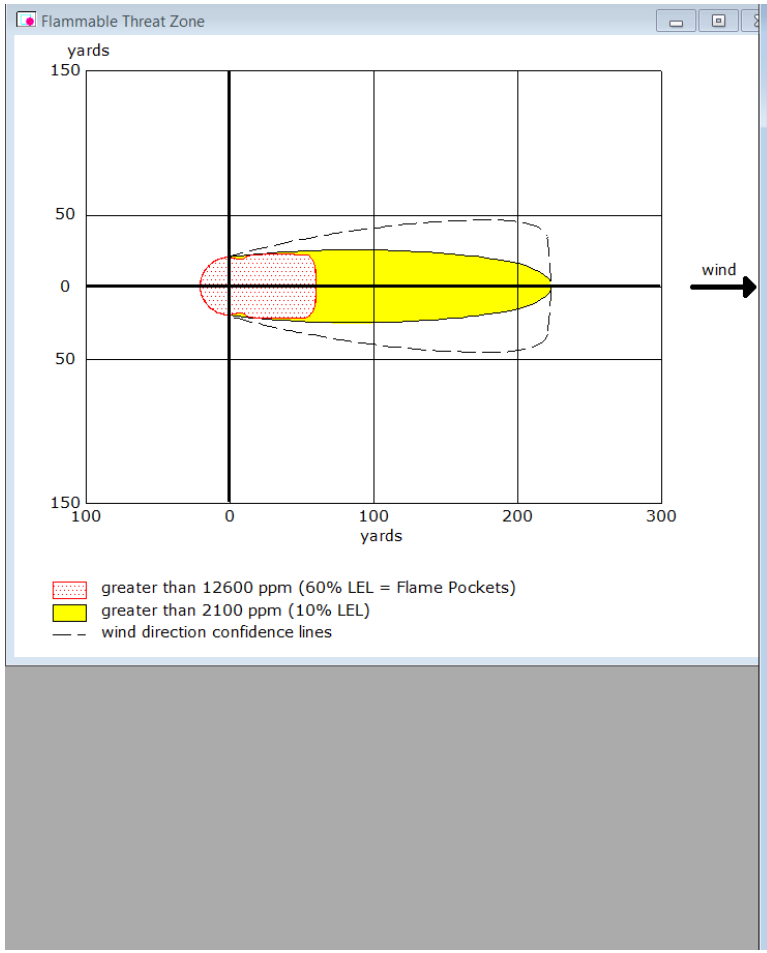
```
SITE DATA:
  Location: WATKINS GLNE, NEW YORK
  Building Air Exchanges Per Hour: 0.95 (unsheltered single storied)
  Time: October 21, 2014  1406 hours EDT (using computer's clock)

CHEMICAL DATA:
  Chemical Name: PROPANE                  Molecular Weight: 44.10 g/mol
  AEGL-1 (60 min): 5500 ppm   AEGL-2 (60 min): 17000 ppm   AEGL-3 (60 min): 33000 ppm
  IDLH: 2100 ppm     LEL: 21000 ppm       UEL: 95000 ppm
  Ambient Boiling Point: -44.4° F
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
  Wind: 10 miles/hour from w at 3 meters
  Ground Roughness: urban or forest       Cloud Cover: 5 tenths
  Air Temperature: 45° F                  Stability Class: D
  No Inversion Height                     Relative Humidity: 50%

SOURCE STRENGTH:
  Leak from hole in horizontal cylindrical tank
  Flammable chemical escaping from tank (not burning)
  Tank Diameter: 12 feet                  Tank Length: 40 feet
  Tank Volume: 33,841 gallons
  Tank contains liquid                    Internal Temperature: -46° C
  Chemical Mass in Tank: 66.7 tons        Tank is 80% full
  Circular Opening Diameter: 15 inches
  Opening is 3.00 feet from tank bottom
  Ground Type: Water                      Water Temperature: 45° F
  Max Puddle Diameter: Unknown
  Release Duration: 18 minutes
  Max Average Sustained Release Rate: 15,500 pounds/min
     (averaged over a minute or more)
  Total Amount Released: 101,384 pounds
  Note: The chemical escaped as a liquid and formed an evaporating puddle.
  The puddle spread to a diameter of 56 yards.

THREAT ZONE: (GAUSSIAN SELECTED)
  Threat Modeled: Flammable Area of Vapor Cloud
  Model Run: Gaussian
  Red    : 124 yards --- (12600 ppm = 60% LEL = Flame Pockets)
  Yellow: 594 yards --- (2100 ppm = 10% LEL)
```

NYSDEC OHMS Document No. 201166576-00038



NYSDEC OHMS Document No. 201166576-00038

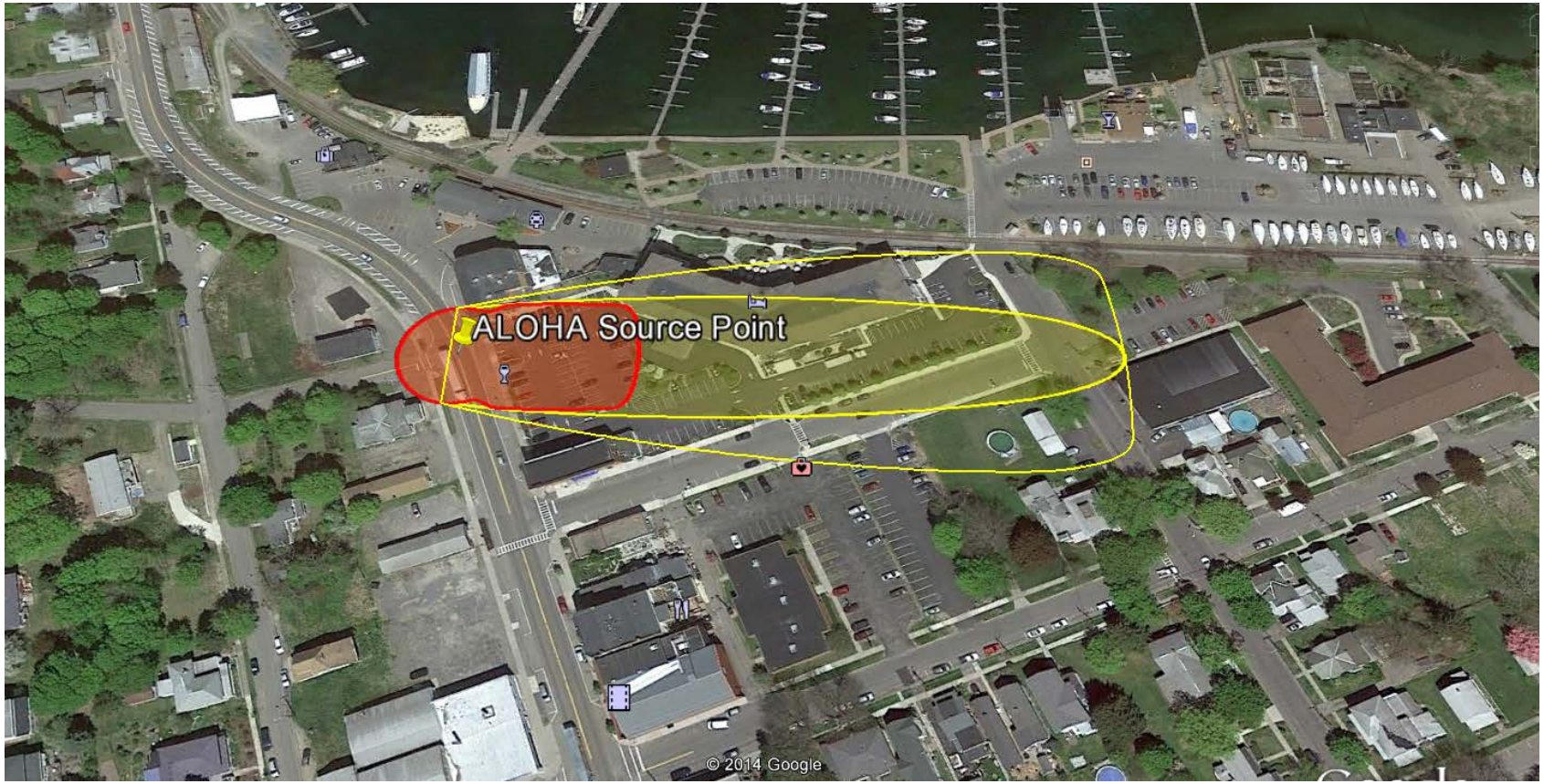
Example 2: Bulk Tanker truck accident north end of Watkins Glen at the intersection of Division Street and N Franklin.



Text Summary

```
SITE DATA:
  Location: WATKINS GLNE, NEW YORK
  Building Air Exchanges Per Hour: 0.95 (unsheltered single storied)
  Time: October 21, 2014  1406 hours EDT (using computer's clock)

CHEMICAL DATA:
  Chemical Name: PROPANE                  Molecular Weight: 44.10 g/mol
  AEGL-1 (60 min): 5500 ppm   AEGL-2 (60 min): 17000 ppm   AEGL-3 (60 min): 33000 ppm
  IDLH: 2100 ppm     LEL: 21000 ppm       UEL: 95000 ppm
  Ambient Boiling Point: -44.4° F
  Vapor Pressure at Ambient Temperature: greater than 1 atm
  Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)
  Wind: 10 miles/hour from w at 3 meters
  Ground Roughness: urban or forest       Cloud Cover: 5 tenths
  Air Temperature: 45° F                  Stability Class: D
  No Inversion Height                     Relative Humidity: 50%

SOURCE STRENGTH:
  Leak from hole in horizontal cylindrical tank
  Flammable chemical escaping from tank (not burning)
  Tank Diameter: 7 feet                   Tank Length: 40 feet
  Tank Volume: 11,515 gallons
  Tank contains liquid                    Internal Temperature: -46° C
  Chemical Mass in Tank: 22.7 tons        Tank is 80% full
  Circular Opening Diameter: 10 inches
  Opening is 1.61 feet from tank bottom
  Ground Type: Concrete
  Ground Temperature: equal to ambient
  Max Puddle Diameter: Unknown
  Release Duration: 15 minutes
  Max Average Sustained Release Rate: 3,820 pounds/min
     (averaged over a minute or more)
  Total Amount Released: 35,715 pounds
  Note: The chemical escaped as a liquid and formed an evaporating puddle.
  The puddle spread to a diameter of 40 yards.

THREAT ZONE: (GAUSSIAN SELECTED)
  Threat Modeled: Flammable Area of Vapor Cloud
  Model Run: Gaussian
  Red    : 60 yards --- (12600 ppm = 60% LEL = Flame Pockets)
  Yellow: 223 yards --- (2100 ppm = 10% LEL)
```

NYSDEC OHMS Document No. 201166576-00038



NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 7

NYSDEC OHMS Document No. 201166576-00038

January 21, 2015

JM Trucking & Exc.Inc
3853 County Road 1
Hector N.Y. 14841

Governor Andrew Cuomo
NYS State Capitol Building
Albany, NY 12224

Dear Governor Cuomo:

I am the owner of JM Trucking & Excavating in Watkins Glen, New York. As a small business owner and longtime resident, I'm writing to support Crestwood's LPG storage project.

Most residents of our community understand that propane has been stored and transported safely around these parts for decades, and some of us with more "life experience" remember when US Salt stored propane along Seneca Lake. Despite what you might hear, most of our community wants to support US Salt and its owner. We're simply not used to needing to voice support for something as basic as propane storage.

But times have changed. A vocal group of environmentalists opposed to oil and gas development want to make an example out of Crestwood's project. They claim the project relates to fracking, but propane has never been produced in New York and has always been brought into our state from other places.

They oppose dirty fuels, but propane is clean burning and friendly to the environment. Many of these protestors heat their homes with propane, along with 20% of the homes in Schuyler County and about a quarter of a million homes statewide.

The worst thing about this whole thing, though, is the economic hit our communities will take if we lose this project. We cannot waive a magic wand to replicate the jobs or tax revenues that would result from this project. Our taxes are too high already, and our residents and businesses cannot afford to fund a bigger piece of the funding needed by our schools, fire districts and other civil services.

We need our local tourism industry to thrive, but our wineries and lodges cannot honestly say that gas storage has limited their growth. If anything, it has helped fuel their growth. And with 30 gas storage facilities across New York and propane storage in salt caverns in the Finger Lakes dating back 60 years, there's no reason to think we will not grow both industries while growing our communities.

Regards,

James Munroe
President

NYSDEC OHMS Document No. 201166576-00038

Finger Lakes LPG Storage, LLC's
Post-Issues Conference Brief

Application No. 8-4432-00085

EXHIBIT 8

NYSDEC OHMS Document No. 201166576-00038

Potential Construction Hours Condition

Construction activities on the LPG storage project, including all project components (including but not limited to rail terminal, truck terminal, brine ponds, piping), will commence no earlier than 6 a.m. and cease no later than 8 p.m., with the following limited exceptions:

- Well-related activities (including but not limited to drilling, logging, running casing, cementing) that must be performed continuously;
- Activities required in response to non-routine incidents to prevent harm to the environment and to protect employees and the public; and
- Upon prior written notice to, and approval from, the Department, any activities to address unusual events not specified above.

Non-routine incidents must be reported in accordance with Permit Condition 8 of Attachment 1.