BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of

Natural Gas Pipelines to Serve Dunkirk Generating Facility

Cases 14-T-0360 and 14-T-0458

December 16, 2014

Prepared Exhibits Of:
Dunkirk Gas Corporation Panel

Michael Sommer, NRG Energy, Inc.

Salvatore Caiazzo, Hanover
Engineering Associates, Inc.

Alan Finio, TRC

Exhibit DGC-3. DGC corrected Staff Environmental Panel Exhibit EP-3 (Comparison Table of Major Project Components)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																
2	Project	Length miles	# Municipalities	# Parcels	Acres	Streams	Watercourses	NYS WL	NWI WL	404 WL	Acres Vineyards	Adj. Util ROW miles	% Adj ROW	# Road		
3	Dunkirk LLC	11.3	~~4~~ 3 [1]	112	133	5	25	~~4~~ 0 [2]	3	38	~~9.7, (13.89)~~ 3.91 (9.1) [3]	7.4	64	13* [4]		
4	National Fuel	9.5	5	102	115	4	9	0	1	?	12.1, (?)	4.9*	52	16*		
5																
6	*estimated from application maps															
7																
8											(Temporary ROW)					

[1] The DGC project crosses 3 municipalities – City of Dunkirk, Town of Dunkirk and Town of Pomfret.

[2] DGC does not cross any currently mapped Article 24 wetlands.

[3] As indicated in the DGC response to DEC Interrogatory DEC Set IV dated 11/28 the impact calculation for permanent impacts to vineyards was corrected and reduced from 9.7 acres of impacts to 3.91.

[4] The number of road crossings for the DGC project is correct at 13 road crossings.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
STAFF OF THE DEPARTMENT OF PUBLIC SERVICE
INTERROGATORY/DOCUMENT REQUEST

Request No.:	DPS-1 JS-1
Requested By:	John Strub, Dean Long
Date of Request:	October 17, 2014
Response Due:	October 27, 2014, **Revised November 14, 2014**
Witness:	Mike Sommer, Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC
Subject:	Information Regarding/Changes to EM&CP

GENERAL COMMENTS ON MAPS:

1.) In the map packet that accompanied the EM&CP for this project Dunkirk has submitted two sets of similar maps. One set of maps that are numbered 5 of 96 thru 28A of 96 and are labeled E&SPC LAYOUT PLAN and a second set of maps that are numbered 67 of 96 thru 90 of 96 and are labeled PCSM LAYOUT PLAN. Please explain what each of the monikers (E&SPS & PCSM) stand for and how each will be used during construction and restoration of the proposed project.

Response: The moniker E&SPC stands for Erosion and Sediment Pollution Control Plan while PCSM stands for Post-Construction Stormwater Management. The E&SPC (Sheet 5 through 28A) identities the best management practices to be used during construction to control erosion and sedimentation. The PCSM (Sheet 67 through 96) identifies the best management practices (i.e., restoration) to control stormwater after construction activities are completed. To avoid confusion, the naming of the PCSM has been changed to SWPP Plan in the revised drawings that accompany this response.

2.) Within the sets of the maps mentioned above the dimensions of any needed additional temporary work space are not labeled. Please provide these dimensions along with the applicable E&SPC SITE DETAIL and HDD PLAN & PROFILE (Sheet 29 of 96 thru 66 of 96)

Response: The dimensions of the additional temporary work spaces have been labeled on the revised drawings that accompany this response.

GENERAL COMMENTS ON MAPS 91 thru 96 of 96 (E&SPC TYPICAL DETAIL SHEET 1 thru 6:

3.) Map 91 of 96

A.) Under the General Notes Section for items 2&3 it discusses the delineation of ROW boundaries and wetland and stream resources in the field and it discusses the use of pin flags to mark out these resources. Eliminate this option from the toolbox.

Response: The option of pin flags have been eliminated from Sheet 91 of the revised drawings that accompany this response.

B.) Under the Plan Notes Section for item # 10 it discusses the location of vulnerable agricultural soils and it states that these are depicted on the plans. Please provide information relative to the presence or absence of vulnerable soils and if present please provide this information on the plans. There should also be a section in the EM&CP text discussing this issue.

Response: Dunkirk Gas Corporation has identified prime agriculture soils and highly erodible soils on Sheets 3 and 4 of 96 of the revised SWPP Plans drawings that accompany this response.

C.) Under the General Environmental Restriction Section for item #3 it discusses the use of approved chemicals agents to minimize fugitive dust emissions. Eliminate the use of chemical agents and use an alternate method.

Response: The use of a chemical agent has been removed from the revised drawings that accompany this response.

D.) Under the Specific Wetland Crossing Restrictions Section for item #5 it states that, "no temporary sidecast of fill material is permitted in forested wetlands, where practicable, spoil shall be used as backfill." Please provide a list of the forested wetlands that will be crossed and their location and explain the disposition of ditch spoil during trenching activities.

Response: A table has been provided on Sheet 91 of the revised plans listing the wetland number, associated station, and a description of the location of the temporary trench spoil by station and direction of temporary workspace (i.e. Station X+00 in ATWS on Northeast side of ROW). The revised drawings accompany this response.

Map 92 of 96:

A.) Under the Pipe Line Construction Plan Notes Section and under the fourth paragraph of the section labeled as Limiting Exposed Areas it discusses a 30 day open trench at any given point. The length and time of open trench has already been discussed in the text of the EM&CP. Please ensure that this section coincides with the text of the EM&CP.

Response: The time of open trench has been modified to match the EM&CP text and is reflected on the revised drawings that accompany this response.

Map 93 of 96

A.) Please provide a Standard Detail diagram for the construction of a straw/hay bale retention pond.

Response: The standard detail for the construction of a straw/hay bale retention pond has been added to Sheet 95 on the revised drawings that accompany this response.

B.) Required Spacing for Temporary Waterbars – On this page Staff believes that the spacing is too restrictive. Staff recommends that the Company use Table 1 (Diversion Ditch Spacing) of DPS's approved EM&CS&Ps. At a minimum waterbars should be installed as appropriate.

Response: The water bar spacing table has been replaced with Table 1 from DPS's EM&CS&P on the revised drawings that accompany this response.

Map 94 of 96

A.) For the Stream Crossing Chart on this sheet revise this chart under the Pipe-X-ing Detail and change FSC to D&P with the exception of Crooked Brook.

Response: All stream crossings in the stream crossing chart on Sheet 94 have been modified to identify to be done by a Dam and Pump Around Stream Crossing method, with the exception of Crooked Brook crossing. This modification are reflected on the revised drawings that accompany this response.

Map 95 of 96

A.) Please provide an additional standard construction detail for silt fence that does not show the wire reinforcement in the detail.

Response: The construction detail for silt fence without wire reinforcement has been added to Sheet 95 of the revised drawings that accompany this response.

Map 96 of 96

A.) Please eliminate Standard detail 36D because this detail refers to the installation of "in-trench" drain lines at sand bag trench breakers and is not applicable for this project due to the depth of the pipeline.

Response: The Standard Detail 36D has been eliminated from Sheet 96 of the on the revised drawings that accompany this response.

B.) Please add construction detail standards for drain tile repair across the pipe trench, the installation of a sandbag trench breakers, and an impervious sand bag trench breaker.

Response: A standard detail for drain tile repair across pipe trench has been added to Sheet 96 on the revised drawings that accompany this response. The impervious trench breaker detail is shown on Sheet 93. An additional detail for sandbag trench breaker has also been added to Sheet 96.

SPECIFIC COMMENTS & REQUESTS ON MAPS:

4.) On maps sheet 6 of 96 and site detail sheet 32 of 96 the off ROW access road is labeled as temporary while on aerial map 3 of 47 this same road is labeled as a permanent road. Please indicate which label is correct, and make this labeling uniform on all three maps by labeling as a permanent proposed access road or if it will be temporary, why it will be temporary.

Response: This will be a permanent access road. Dunkirk Gas Corporation will obtain the rights to use this access for the operation and maintenance of the pipeline between the two rail crossings. This access road will not be improved with stone, as access should only be needed for inspections and ROW maintenance. It will therefore be a grass access road, with no permanent fill in the wetland. The labeling has been modified on Sheet 6 of 96, Site Detail Sheet 32 of 96 and Aerial Map 3 of 47 of the revised drawings that accompany this response.

5.) Maps sheet 6 of 96, site sheet detail 32 of 96, and aerial map 3 of 47 between approximate stations 41+00 and 45+00, place an off ROW access road east off the pipeline, on the National Grid ROW, per the field walk thru notes. It was discussed that this access would be for light truck traffic only and would use the existing bridge crossing to alleviate congestion during pipeline construction, please confirm.

Response: This temporary access road has been added to the plans and will be utilized for light traffic only during construction, pending approval for use by National Grid. The addition of this temporary access road is reflected on Sheet

6 of 96, Site Sheet Detail 31 of 96, and Aerial Map 3 of 47 of the revised drawings that accompany this response.

6.) Please provide information regarding additional temporary work space with dimensions of 20 feet wide and 40 feet long on maps sheet 6 of 96 and aerial map 3 of 47 at approximate station 58+00 on the east side of the ROW and south of Stream SB-13.

Response: While this workspace would be advantageous for construction, it would also be located within the National Grid ROW at a crossing of their ROW. National Grid has requested workspace within their ROW to be limited for safety reasons. Dunkirk Gas Corporation has left this ATWS area out for these reasons.

7.) On map sheet 7 of 96 and site sheet detail 33 of 96 and aerial map 4 of 27 between stations 84+00 and 85+00 on the east side of the proposed pipeline ROW south of Wetland #WC-1, please add a 50 foot by 50 foot area of additional temporary workspace per our field walk thru notes.

Response: Although this extra workspace would be advantageous for construction staging between the vineyards, addition of this 50' by 50' ATWS area would cause increased disturbance to the vineyard crop and the wetland running down the middle of the lane. Dunkirk Gas Corporation has left this ATWS area out for these reasons.

8.) On map sheet 9 of 96 and detail site sheet 36 of 96 and aerial map 6 of 47 to the north of Chestnut Road between approximate stations 127+30 and 128+30 at the east side of the proposed pipeline ROW there is a pine plantation. Please narrow the ROW in this area to avoid tree clearing and add notes on the maps indicating such.

Response: The limits of earth disturbance has been narrowed in this area to avoid tree clearing of the plantation trees that currently exist. This modification has been made to Sheet 9 of 96, Detail Site Sheet 36 of 96 and Aerial Map 6 of 47 of the revised drawings that accompany this response. In addition, a note has also been added to these sheets indicating the avoidance of clearing the plantation trees.

9.) On map sheet 9 of 96 and detail site sheet 36 of 96 and aerial map 6 of 47 to the south of Chestnut Road at approximate station 132+50 on the west side of the ROW there is a large cottonwood tree that may be in the temporary ROW. Please add notes on the maps to try to avoid cutting this tree, if possible.

Response: A note has beed added to avoid the cutting of the large cottonwood tree at approximate Station 132+50 to Sheet 9 of 96, Detail Site Sheet 36 of 96 and Aerial Map 6 of 47 of the revised drawings that accompany this response.

10.) On map sheet 11 of 96 and aerial map 7&8 of 47 between approximate stations 150+00 and 192+00 please provide the location of several surface farm drains in this active agricultural field.

Response: The locations of the surface farm drains have been labeled on Sheet 11 of 96 and Aerial Maps 7 and 8 of 47 of the revised drawings that accompany this response. In addition, a note has been added directing the contractor to bridge these features for construction access on the E&SPC plans and to restore to existing conditions upon completion of construction activities on the SWPP Plans and both notes have been added to the aerial maps.

11.) On map sheet 12 of 96 and site detail sheet 37 of 96 it shows the use of a wooden mats on the off ROW access going across wetland #WA-4. Please eliminate the wooden mats at this location because there is a raised hardened gravel road under the mats that would support equipment during pipeline construction.

Response: The use of the wooden mats across Wetland WA-4 has been eliminated on Sheet 12 and Site Detail Sheet 37 of the revised drawings that accompany this response.

12.) Map sheets 12 & 13 of 96 and detail site sheet 38 of 96 and Aerial map 9 & 10 show the location of an Off ROW access road to the south of Van Buren Road along the west edge of an agricultural field/pasture. This access road is in the wrong location based on discussions during the field review. Please update this alignment to turn east and parallel Van Buren Road, in the agricultural field, to the pipeline ROW.

Response: The location of this off ROW access road was requested by the property owner, who preferred to not have the access road cross their field at the location discussed during the walk through.

13.) On map sheet 13 of 96 and site detail sheet 64 of 96 there appears to be a discrepancy of the stationing of the drill entry point on the south side of Interstate Route 90 some of the maps call for an entry point of 236+00 and another map calls for an entry point of 242+50. Please re-evaluate and make adjustments to any mapping as necessary in this immediate area.

Response: The correct Stationing of the drill entry point is Station 242+50 and this discrepancy has been fixed on the revised drawings that accompany this response.

14.) On map sheet 14 of 96 and aerial map 11 of 47 between approximate stations 260+50 and 261+30 on the east edge of the ROW, south of Stream # DC-2 please add one (1) additional temporary extra work space with a dimension of 30 feet wide and 80 feet long per our field walk thru notes.

Response: This workspace between approximate Stations 260+50 and 261+30 has been added, pending land owner approval, to the revised drawings that accompany this response.

15.) On map sheet 17 of 96 and aerial map 14 of 47 at approximate stations 328+00 and 330+00 there are two additional temporary work space areas each 60 foot in length (designated on 14 of 27 not 17 of 96). Dunkirk needs to show a 20 foot width for each of these areas per our field walk thru notes.

Response: The two ATWSs at approximate Station 328+00 and 330+00 will be 20' wide and 60' long and as reflected on the revised drawings that accompany this response.

16.) On aerial map 14 of 47 at approximate station 344+00 there is some additional temporary work room designated on the west edge of the ROW. This work room needs to be reduced to 30 feet wide and 80 feet long per our field review notes.

Response: The ATWS at approximate Station 344+00 has been reduced to 30' wide by 80' long and as reflected on the revised drawings that accompany this response.

17.) On map sheet 18 of 96 and detail sheet 45 of 96 and aerial map 15 of 47 at approximate station 353+00, Dunkirk should survey the boundaries of this small pond, on the west side of the ROW, to get an overall picture of the pond's location in relation to the proposed pipeline and plot its location on the three maps mentioned above.

Response: The pond location and normal pool elevation has been shown on Sheet 18 of 96, Detail Sheet 45 of 96 and Aerial Map 15 of 46 of the revised drawings to be submitted by November 14, 2014.

18.) On map sheet 19 of 96 and site detail sheet 47 of 97 and aerial map at approximate station 376+00 on the west edge of the ROW on the south side of Stream # SB-2 please add one (1) additional 20 foot wide and 30 foot long additional temporary work space per our field review notes.

Response: Dunkirk Gas Corporation has reduced the ATWS to 20' x 30', as noted on Sheet 19 and 47 of 96 and 16 of 47 of the revised drawings that accompany this response.

19.) On map sheet 21 of 96 and aerial map 18 of 47 and at approximate stations 436+30 and 438+00, please delineate two (2)-20 foot wide by 60 foot long additional temporary workspace on the west edge of the ROW per our field review notes.

Response: This ATWS area would be mostly on adjacent property with whom Dunkirk Gas Corporation has not been involved with in land acquisition

negotiations. Therefore this area has not been added, but have included ATWS at Station 435+00 and 440+00 on Sheet 21 of 96 and Aerial Map 18 of 47 of the revised drawings that accompany this response.

20.) On map sheet 23 of 96 and aerial map 20 of 47 at approximate station 498+00 on the west edge of the ROW please add additional temporary work space with a dimension of 30 feet wide and 100 feet long per our field review notes.

Response: This ATWS area would be mostly on adjacent property with whom Dunkirk Gas Corporation has not been involved with in land acquisition negotiations. Therefore, this area has not been added.

21.) On map sheet 25 of 96 and aerial map 22 of 47 at approximate station 524+00 please eliminate the additional temporary work space on the west edge of the ROW and on the east edge of the ROW reduce the additional work space to 30 feet wide by 80 feet long. At approximate stations 526+00 and 527+50 two (2) to additional 30' X 80' temporary additional work space areas need to be placed on the east edge of the ROW per our field review notes.

Response: The ATWS on the west edge has been eliminated and the ATWS on the east edge has been reduced to 30' wide by 80' long at approximate Station 524+00. Two ATWS that are 30' wide by 80' long have been added at 526+00 and 527+50. These modifications are reflected on the revised drawings that accompany this response.

22.) On map sheets 25 of 96 and aerial map 22 of 47 at approximate station 536+00, please update the maps to reflect the need to install additional temporary work space on the east edge of the ROW with a dimension of 20 feet X 60 feet. Also, at approximate station 539+00 on the east edge of the ROW, another 20 foot X 60 foot extra work space should be installed along the hedge row and perpendicular to the ROW.

Response: These two ATWS has been added at approximate Stations 536+00 and 539+00 (along the hedge row) and are reflected on Sheet 25 of 96 and Aerial Map 22 of 47 of the revised drawings that accompany this response.

23.) On map sheet 25 of 96 and aerial map 22 of 47 at approximate station 543+50 on the east edge of the ROW and south of Stream # SC-8, please install an area of additional temporary workspace with a dimension of 20 feet wide and 30 feet long per our field review notes.

Response: This ATWS has been added at approximate Station 543+50 as reflected on Sheet 25 of 96 and Aerial Map 22 of 47 of the revised drawings that accompany this response.

SOILS

24.) Regarding sheet 3 of 96 and 4 of 96:
   a. Soil resolution identifies detail sheet 6 for procedures to address sinkholes. Will there be procedures for sinkholes? What is the correct reference?

      Response: The correct reference is Detail Sheet 6 which is Sheet 96 of 96.

   b. Please revise the soils resolutions to identify specific soils that maybe erodible or are important agricultural soils.

      Response: The soils that are highly erodible or are important agricultural soils have been identified by hatchings on Sheets 3 and 4 of the revised drawings that accompany this response.

25.) Regarding sheet 92 of 96 general notes:
   a. What is a compost sock?

      Response: Sheet 92 of 96 has been modified to replace compost sock with silt fence as on the revised drawings that accompany this response.

26.) Regarding sheet 93 of 96 Typical Timber Mat:
   b. A 4X4 inch wood member timber should be identified as a minimum timber mat and for light traffic. The use of geo fabric under the mat may not be a significant benefit and should be optional. Please add to the note that other heavy timber mats composed of 8X8-12X12 inch timbers or composite mats will also be used to support equipment.

      Response: The notes revisions have been modified per the comment and are shown on the revised drawings that accompany this response.

SPECIFIC COMMENTS ON TEXT OF EM&CP:

39.) Under section 13.3 - Drain Lines – (page 66) the applicant indicates that it will consult with the farm owner/operator and the NRCS or the Soil & Water Conservation District to determine if plans or recommendation exist for the installation of future drainage installation. Please provide DPS Staff with the progress of these consultations. Also please indicate any consultation with NRCS and if any information was obtained, from them, with respect to the location of any existing drain tiles in the active agricultural fields on this project. In addition please provide a schedule when this information will become available.

Response: Dunkirk Gas Corporation has reached out to the County Soil & Water Conservation District. There are no maps available that show the locations of existing drain tiles in the active agriculture fields. The District has provided a standard detail for working across existing drain tiles in active

agricultural fields which has been incorporated into the revised drawings that accompany this response.

SPECIFIC COMMENTS ON APPENDICES OF THE EM&CP

45.) Appendix H – HDD Drilling Profiles – For the HDD Profile for Stream #SB-3 the aerial photography appears to be incorrect. Please supply the correct aerial photography and make any adjustments as necessary.

Response: The background aerial photography for the HDD Profile for Stream #SB-3 has been corrected. All of the HDD profiles have also been updated based on the DPS Staff comments received and the revised Appendix H is provided with this response.

46.) Please provide the following additional appendices:
a.) Traffic Control Plan

Response: Dunkirk Gas Corporation has prepared a Traffic Control Plan as Appendix K to the revised EM&CP. The Traffic Control Plan is provided with this response.

b.) Traffic Transportation Plan

Dunkirk Gas Corporation has prepared a Traffic and Transportation Plan as Appendix L to the revised EM&CP. The Traffic and Transportation Plan is provided with this response.

c.) Winter Stabilization Plan

Dunkirk Gas Corporation has prepared a Winter Stabilization Plan as Appendix M to the revised EM&CP. The Winter Stabilization Plan is provided with this response.

d.) Dunkirk Security Plan at the point where the proposed pipeline leaves the station thru the chain linked fence.

Dunkirk Gas Corporation has prepared a Dunkirk Security Plan as Appendix N to the revised EM&CP. The Dunkirk Security Plan is provided with this response.

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RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 1
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: The explanation requested basically states the size of the pipeline is necessary because it is. No analysis or information is provided nor were the specific questions as to whether the pipe size or pressure could be reduced. (Non-responsive)

Response: Tennessee Gas Pipeline Company (TGP) has provided a pressure history for their pipeline. Pressure on this pipeline has ranged between 696 psig and 495 psig from January 2012 through January 2014. This pressure history does not take into account the additional load that will be added once the Dunkirk Power Plant is operating on natural gas. A rough estimation of how the pipeline pressure is affected by the additional load is by an additional 50 psi pressure drop.

DGC has selected a 16" NPS for the pipeline due to the upstream pressure condition. See the below table for a comparison between 14" NPS and 16" NPS pipelines. If a 14" NPS pipeline were selected the outlet pressure may not meet the plant's pressure requirements. In addition, the downstream gas velocity far exceeds any acceptable standard for maximum gas velocity.

	14" NPS	**16" NPS**
Design Flow Rate	117 MMscfd	117 MMscfd
Upstream Pressure	445 psig	445 psig
Upstream Velocity	44.3 ft/sec	33.6 ft/sec
Downstream Pressure	89.1 psig	324.9 psig
Downstream Velocity	208 ft/sec	45.8 ft/sec
Plant Pressure Requirement	100 psig	100 psig

Note: Weymouth Equation utilized for calculations.

DEC 1 also asks if the pressure can be reduced in this pipeline. In theory, a 16" NPS pipeline's upstream pressure can be reduced below 445 psig. In practical purposes, it cannot be reduced due to the following reasons:

- TGP does not guarantee a minimum pressure in their pipeline. The upstream pressure could actually be less than our rough estimate of 445 psig.

- Adding an additional pressure regulation facility is not prudent because:
  - It will add unnecessary cost to the project.
  - It will add unnecessary maintenance activities to the pipeline.
  - It will add unnecessary complexity to the process control scheme.
  - It will require additional private land use.
  - It will add unnecessary noise to the immediate vicinity of facility.
  - It will unnecessarily limit capacity/pressure in the pipeline increasing the size of downstream facilities.

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RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 2
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: Please indicate the steps DGC is or is planning to take to investigate the feasibility of connecting DGC's pipeline to NFG's distribution system. (Follow-up)

Response: NFG response to DPS-2 DL-2 stated that it is feasible.

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RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 3
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Routing
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: The Table in part (a) indicates 38.2 acres of permanent impact, including 9.70 acres of permanent impact to "Potential agricultural lands, including vineyards"; however, the verbiage indicates "there are no permanent impacts to potential agricultural lands." Please explain. (Follow-up)

In addition, please provide DGC's proposal for mitigation of all permanent impacts. (Follow-up)

Response: The table previously provided combined the two cover types of potential agricultural lands and vineyards. However, the impacts identified was only for the vineyards as there will be no permanent impacts to potential agricultural lands.

A revised table is being provided below for three reasons: 1) to separate the two categories to clarify the distinction between potential agricultural lands and vineyards; 2) to revise the permanent impact acreages based on the revised EM&CP drawings; and 3) correct a mistype in the permanent impact to vineyards from the previously submitted table.

Land Type	**Permanent Impact (Acres)**
Active Agricultural Lands	0
Potential Agricultural Lands	0
Vineyards	3.91
Forest Lands	18.61
Successional Shrubland	3.41
Undeveloped Open Land	0
Wetlands (forested wetland conversion no net wetland loss)	3.31
TOTAL	29.24

DGC will provide mitigation for permanent impacts associated with loss of vineyards and wetland conversion as described below.

DGC will consult with Cornell University's Lake Erie Grape Program Extension staff to develop a detailed re-planting and mitigation plan specific to vineyard operations, in cooperation with the respective vineyard owners. In addition, DGC is working with the individual landowners on compensation for production loss.

As previously indicated, DGC is proactively working to develop a Conceptual Wetlands Mitigation Plan to satisfy the USACE, DPS and DEC in anticipation of potential conditions for wetland restoration/enforcement, wetland creation, and wetland preservation. Upon acceptance of the Conceptual Wetlands Mitigation Plan, DGC will provide a copy of the Final Wetlands Mitigation Plan.

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RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 5
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Maintenance
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: Please confirm that the response indicates there is presently no DGC Operations & Maintenance Plan for the proposed pipeline. Please indicate when the O&M Manual will be prepared and available for review. (Follow-up)

Response: Confirmed. The required regulations governing O&M were referenced in the response, the actual manuals will be prepared in parallel with project construction, completed prior to pipeline operation and submitted for review under the EM&CP procedures.

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RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 6, 7 & 22
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Required Permits
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: Please provide a copy of:

- The Nationwide Permit 12 Pre-Construction Notice ("PCN") to the U.S. Army Corps of Engineers ("USACE") when it is filed. (Follow-up)
- The Notice of Intent and the Project's Stormwater Pollution Prevention Plan ("SWPPP") to DEC. (Follow-up)
- Please update the Response and provide approvals/rejections from each federal, state and local agency, including any conditions imposed by those entities included in such approvals. (Follow-up)

Response: Upon the filing of the USACE PCN and the SWPPP, DGC will provide copies as requested.

A table summarizing the current status of the required permits for the Project is provided below.

Required Permits for the Dunkirk Natural Gas Pipeline Project			
Agency	**Permit**	**Status**	**Conditions of Approval**
Federal			
U.S. Army Corps of Engineers	Nationwide Permit 12	Anticipate filing in early December 2014	-
U.S. Fish and Wildlife Service	Section 7 Consultation	IPAC Consultation submitted in October 2014 USFWS Acknowledgment of determination on the findings that the project will not have an adverse impact on northern long eared bat and other federally protected threatened and endangered species was issued 11/5/2014	A copy of the determination and supporting materials must be sent to any involved Federal agency for their final ESA determination. Until the proposed project is complete, USFWS recommends checking the website every 90 days to ensure that listed species presence/absence information is current. Should project plans change or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.
State			
N.Y.S. Department of Environmental Conservation	SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-10-001)	Anticipate filing in early December 2014	-
N.Y.S. Department of Environmental Conservation	Petroleum Bulk Storage Registration	Will be filed prior to placing the condensate tank in service	-
N.Y.S. Department of Transportations	Utility Work Permit	Anticipate filing in early December 2014	-
N.Y.S. Department of State	Coastal Zone Consistency Assessment	Anticipate filing in early December 2014	-
N.Y.S. Thruway Authority	Work Permit	Submitted in October 2014 Approval Pending	
N.Y.S. Office of Parks, Recreation and Historic Preservation	Section 106 Consultation	Submitted Phase IA/IB Survey Report and Historic Structure Report in September 2014	OPRHP must receive a copy of the construction plan sheet detailing the suggested avoidance measures to the one

Required Permits for the Dunkirk Natural Gas Pipeline Project			
Agency	**Permit**	**Status**	**Conditions of Approval**
		ORPHP indicated no further historic/cultural concerns in letter dated 10/31/14 OPRHP indicated no further building/structure concerns in letter dated 11/20/14	historic archaeological site identified and the 50-foot buffer during construction to issue an effect opinion.
Local and Other			
Norfolk Southern Railroad	Utility Crossing	Submitted in October 2014	-
CSX Railroad	Utility Crossing	Submitted in October 2014 Approval Pending	-
Chautauqua County	Road Occupancy and Crossing Permits	Anticipate filing in early December 2014	-
City of Dunkirk	Road Occupancy and Crossing Permits	Submitted in October 2014	-
Town of Dunkirk	Road Occupancy and Crossing Permits	Anticipate filing in early December 2014	-
Town of Pomfret	Road Occupancy and Crossing Permits	Anticipate filing in early December 2014	-

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 12
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Dunkirk Station Operations
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: The Request sought an explanation for the difference between the Term Sheet 10-year term, and DGC's response to DPS Staff regarding purchasing gas in "terms ranging from months to one to two years".

Response: As explained in the response to DEC 12, DGC will procure gas supply and services in a series of agreements of varying duration, over the 10-year term of the Term Sheet, rather a single agreement spanning the full 10 year term.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 13
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: The specific question as to what function DGC and the DGC pipeline would play in providing gas to the Dunkirk Power Plant was not answered. (Non-responsive)

Response: Dunkirk Generating will purchase the gas through its marketing affiliate, NRG Power Marketing LLC ("PML") and PML will arrange transportation on the DGC pipeline to Dunkirk Generating.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 16 & 31
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Roadway Crossings and Other Utilities
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: Has DGC completed OneCalls for all NFG transmission/distribution lines which cross the proposed pipeline, and if so please provide a map showing those locations and the size of NFG's pipe. (Follow-up)

Response: Yes. DGC has completed several One-Calls, including for all NFG lines in the vicinity of the Project, and have located all utilities marked in the field by the operators who responded and are still awaiting information from several operators. The responses received to date are shown on the aerial plans of the revised EM&CP drawings. As responses continue to be received, DGC will continue to locate additional markings in the field and will update the EM&CP drawings.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 18
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: Has the information provided in Response to DEC 18 been reflected on the latest EM&CP drawings/figures? (Follow-up)

Response: Yes. The revised EM&CP drawings show the additional wall thicknesses and the coatings of the pipeline where crossing floodplains.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV - Follow-Up

Request No.:	DEC 19(c)
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: What is "the maximum potential hourly demand of the power plant at full output" in MMscfd? How was that demand determined; provide calculation. (Follow-up) What actual annual volume does DGC expect to take? Provide rationale and calculation. (Answer was non-responsive)

Response: The maximum demand of the power plant is 117 MMscfd. Maximum hourly demand is calculated as Plant Maximum Output (kW) x Heat Rate (Btu/kW-hr) x 24 hrs/day divided by 1,000,000 = MMBtu/day. Divide MMBtu/day by 1000 to obtain MMscfd.

Annual volume may vary from 2.8 bcf to 8 bcf depending on market conditions. Dunkirk expects to operate during summer and winter peak, as well as for reliability and system congestion needs. The plant and pipeline need to be able to respond to the varying and somewhat unpredictable market conditions that can change based on weather, cost of fuel, transmission system changes, generation additions and retirements.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 20
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: Please update the status of obtaining transportation service from Tennessee. (Follow-up)

Response: Dunkirk Power LLC and Tennessee are finalizing material terms of a transportation and balancing agreement. That agreement will be executed when the final route is determined.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 21
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Pipeline Design
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: With regard to the Dunkirk Power Plant's dual-fuel capability, please indicate the lead time necessary to change over from natural gas to coal in the event sufficient gas supply is unavailable when necessary. (Follow-up)

Response: In an emergency situation of prolonged gas interruption, assuming coal inventory and personnel availability the change over from natural gas to coal would be approximately eight weeks.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 26
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Project Schedule
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: The Request sought the answers to two questions:

- What is the status of NRG Dunkirk Power LLC's adding natural gas firing capability to each of the Units 2, 3 & 4?

- What is the expected date that each of the Units 2, 3 & 4 will actually have natural gas firing capability?

Notwithstanding the lengthy statement in the Response, please confirm that the respective answers to these questions are (Follow-up):

- "…it would not be prudent for Dunkirk Power to make the planned investments in the project until the pipeline route and project is selected." and "The boiler modifications can take as long as 16 months."

- Dunkirk Power LLC is not in a position to commit to an expected date.

Response: While DGC can confirm the above statements, those statements were made in the context of the initial response and are part and parcel of that entire response. Accordingly, those statements should not be taken out of context.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 28
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	EM&CP
Witness:	Michael Sommer Dunkirk Gas Corporation Salvatore Caiazzo, Hanover Engineering Associates, Inc. Alan Finio, TRC

Request: Please confirm that documents - Items a, b, c - identified in the Request and referred to in the EM&CP were not provided and are, therefore, unavailable for reference by DGC. (Follow-up)

a. "General Guidelines for Environmental Management and Construction Plans" (EM&CP Sec. 1)

b. "Environmental Management and Construction Standards and Practices for Underground Transmission and Distribution Facilities in New York State" (EM&CP Sec. II)

c. "Advanced Planning for Siting Article VII Gas Transmission Facilities" (EM&CP Sec. II)

Response: A copy of the EM&CS&P text (Item c) was provided with the original response to DEC-28 on October 31.

DGC has removed reference to the other two documents from the revised EM&CP.

Case 14-T-0360
Article VII – Dunkirk Gas Corporation
Dunkirk Natural Gas Pipeline Project
Application for Certificate of Environmental Compatibility and Public Need

RESPONSE TO
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INTERROGATORY/DOCUMENT REQUEST
SET IV – Follow-Up

Request No.:	DEC 35
Date of Request:	November 18, 2014
Date of Response:	December 1, 2014
Subject Area:	Project Construction
Witness:	Michael Sommer Dunkirk Gas Corporation
	Salvatore Caiazzo, Hanover Engineering Associates, Inc.
	Alan Finio, TRC

Request: This request sought a copy of the RFP to obtain bids for the construction of the project. The Request also sought provisions regarding operation/maintenance and/or ownership of the pipeline in this RFP or any other. DGC refused to provide. Inasmuch as the RFP has been provided to NFG – one of the bidders and a party to this proceeding – the claim of confidentiality cannot be sustained. (Non-responsive)

Response: DGC respectfully disagrees with the assertion made in the question. All bidders have agreed to the confidentiality provisions in the RFP. Accordingly, confidentiality has not been waived and thus can be sustained.

Exhibit DGC-6. DGC corrected Staff Environmental Panel Exhibit EP-4
(Comparison of Landuse Vegetation Change in the Proposed ROW) [1]

	A	B	C	D	E	F
1	DGC Vegetation Type	National Fuel Vegetation Type	DGC ROW Construction Impact Table 4.7-5, acres	National Fuel 80% of Estimate in Table 2, acres	DGC %	National Fuel %
2	Urban	Developed	~~6.2~~ 5.43	19.8	~~5.5~~ 5.1	21
3	Upland Forest	Forested	~~31.7~~ 32.12	21	~~28.4~~ 30.3	23
4	Maintained ROW Successional Forest Successional Shrub	Open Barren	~~39.7~~ 39.4	5.6	~~35.5~~ 37.2	6
5	Agricultural Field Pasture	Non-vineyard Pasture Hay	~~20.3~~ 19.91	35.8	~~18.2~~ 18.8	39
6	Vineyard	Vineyard	~~13.9~~ 9.1	9.6	~~12.4~~ 8.6	10.4

[1] **C**hanges to the construction ROW during the review of the DGC EM&CP were explained in response to DPS Interrogatory DPS-1 JS-1 which resulted in a decrease in construction impacts.

Case 14-T-0458
Application of National Fuel Gas Distribution Corporation for a Certificate of Environmental Compatibility and Public Need

RESPONSE TO
INTERROGATORY/DOCUMENT REQUEST

Requesting Party and No.: DGC-6

National Fuel Response No: NFG-6

Date of Request: December 1, 2014

Information Requested of: National Fuel Gas Distribution Corporation

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Reply Date: December 11, 2014

Response Provided by: Matthew Frank and Diane Sullivan (Responses 1-4)
John Polka (Responses 5-6)

Request:

1. Please identify the proposed modifications to the October 8, 2014 proposed NFG route that are the subject of DPS-3, dated November 13, 2014.

2. Please identify whether and where these modifications were included in the shapefiles submitted by NFDC in response to DPS-3 on November 24, 2014.

3. Please explain how each of the above modifications affects the length of the proposed line.

4. Please refer to Exhibit C to DEC IR-8, sent by NFG on November 28, 2014. Please clarify where the DGC proposed route and the NFG proposed 100 foot corridor, each would interconnect with the existing NFG system to provide the proposed system benefits.

5. Please refer to Exhibit C to DEC IR-8, sent by NFG on November 28, 2014. What difference, if any, is there in the system benefits provided by the DGC route vs. the NFG route?

6. What system benefits would still be obtained without the participation of NFG Supply?

Response:

1. *Route modifications that have been considered by National Fuel Gas Distribution Corporation ("NFG") between October and November have included identifying and verifying suitable site access, workspaces and final easement areas. These modifications have been based upon landowner discussions, agency consultation, avoidance and minimization of impacts to site features and resources, and assessment of constructability.*

2. *An interim study corridor was provided in response to DPS-3, in shapefile format. A final project easement (temporary and permanent), additional temporary work spaces, and planned access roads will be included in a supplement to the Application, anticipated to be filed on December 19, 2014.*

3. *The modifications made to develop the interim corridor had a minor effect on the length of the planned pipeline, which is less than 10 miles in length.*

4. *In order to provide the system benefit on the DGC proposed route, NFG would seek to acquire additional land at the following approximate locations to interconnect with the existing NFG system:*

    a. *North of Lake Shore Dr W near Station 24+00*

    b. *North of West Main Rd near Station 312+00*

    In order to provide the system benefit on the NFG proposed route, NFG would seek to acquire additional land at the following approximate locations to interconnect with the existing NFG system:

    a. *South of Willowbrook Ave near Station 106+00*

    b. *North of East Main St near Station 261+50*

5. *If NFG owned and operated the pipeline, both the DGC route and the NFG route offer similar benefits to the system. The issue is not the path of the pipeline, but the ultimate ownership and operation of it.*

6. *If NFG were able to own and operate the ultimate pipeline providing gas to the Dunkirk Power Plant, some system benefit would occur even without NFG Supply involvement. Specifically, because NFG Distribution would own and operate the line, the threat of bypass would be eliminated resulting in a benefit of about $500,000.00. The other benefits, valued at about $10.5 million, would not be achievable without NFG Supply. Moreover, if NFG Distribution does not own and operate the pipeline, on either route, then no benefit to the system would occur.*

Exhibit DGC-8. Vineyard Impact Preliminary Comparison Table

DGC Current Aligment							
PARCEL	Parallel Length (LF)	Parallel Acres	Non-Parallel Length (LF)	Non-Parallel Acres		Signed	LF (ft)
95.02-1-18	0	0	700	1.41		Y	669
95.02-1-20	1107	2.25	274	0.58		Y	1449
95.02-1-26	337	0.61	0	0		Y	337
95.02-1-24	194	0.45	0	0		Y	640
129.00-2-2	0	0	348	0.69		N	349
129.00-2-78	492	0.97	0	0		N	697
129.00-1-29	1265	2.13	0	0		N	1562
Signed Total							3095
Total	3395	6.41	1322	2.68		4 of 7	5703

DGC has 3095 out of 5703 LF of vineyard parcel ROW signed (54%) and of the 7 vineyard parcels, we have 4 signed (57%).

NFG Route [1]				
PARCEL	Parallel Length (LF)	Parallel Acres	Non-Parallel Length (LF)	Non-Parallel Acres
114.00-3-24	1079	2.54	0	0
114.00-3-26	648	1.42	0	0
114.00-3-27	980	3.8	0	0
114.00-3-29	0	0	382	0.64
114.00-3-30	0	0	155	0.3
114.00-3-31	0	0	391	0.76
114.00-3-33	0	0	278	0.48
131.00-1-51	0	0	291	0.56
131.00-1-50	300	0.87	252	0.5
Total	3007	8.63	1749	3.24

[1] Vineyard impacts calculated using GIS technology and shapefiles provided by NFG

PIPELINE RIGHT-OF-WAY CONSTRUCTION PROJECTS

AGRICULTURAL MITIGATION
THROUGH THE STAGES OF PROJECT PLANNING, CONSTRUCTION/RESTORATION AND FOLLOW-UP MONITORING

By
New York State
Department of Agriculture and Markets
Albany, New York

Rev. 2-11

3.0 CONSTRUCTION/RESTORATION

3.1 CONTROL OF TRENCH WASHOUTS, WATER PIPING AND BLOWOUTS

Trench breakers are installed for the dual purpose of preventing trench washouts during construction and abating water piping and blowouts subsequent to trench backfill. The distance between permanent trench breakers may range from the relatively close-spaced formula of the toe of the upper trench breaker being level with the head of the lower trench breaker to the relatively greater spacing as detailed on the sample drawing "TRENCH BREAKER SPACING" or on the sample chart "PERMANENT SLOPE BREAKER SPACING". The Project Sponsor will record each installed trench breaker location, by map referenced station-number.

3.2 TOPSOIL PROTECTION

In all agricultural portions of the right-of-way, topsoil will be removed from the subsoil stockpile area, trench, construction assembly and traffic zones. The depth of topsoil removal will include all of the "A" horizon down to the beginning of the subsoil "B" horizon, generally not to exceed a maximum of 12 inches. Topsoil removal up to a depth of 16 inches will be required in specially designated soils encountered along the pipeline route and identified in the EM&CP. All topsoil will be stockpiled and separated from other excavated materials. The Agricultural Specialist will determine depth of topsoil stripping per affected farm during EM&CP development by means of the County Soil Survey and on-site soil augering, if necessary. All topsoil material will be stripped, stockpiled, and uniformly returned to restore the original soil profile. During the clearing/construction phase, site specific depths of topsoil stripping will be monitored by the Agricultural Specialist. Where right-of-way construction requires cut-and-fill of the soil profile across grades, to the extent practicable, topsoil stockpiling will be located on the upslope edge of the right-of-way. Where topsoil cannot be seperately stored on the upslope side, suitable right-of-way space will be provided on the downslope side to ensure the complete segregation of the topsoil from all cut-and-fill material.

Right-of-way width for agricultural lands will generally be the maximum necessary to allow adequate space for traffic, the trench and construction area, and the separate stockpiles of both topsoil and spoil material. Except in special conditions, such as road and stream crossings that may require a greater working area, the temporary right-of-way construction width should range from a minimum of 80 feet for a 12 inch diameter pipeline[1], to a maximum of 125 feet for a 36 inch diameter line. In projects using the relatively wide trenching method to meet construction worker safety requirements, a proportionally wider right-of-way will be temporarily acquired.

[1] The term "minimum" refers to the absolute minimum width of the temporary construction right-of-way, under the very best of working conditions: that is, a level farmscape on deep, well drained soil. An 80 feet width, however, is not adequate as the initial, "available width" through farmlands with mild, rolling or moderately steep slopes, nor on soils that are less than well drained or shallow to bedrock. In those situations, the minimum available width of temporary construction right-of-way should be 90 feet. This allows for the inherent cut-and-fill grading; the drift of wet subsoil muds/spoil materials; and the special concerns of shallow bedrock soils, without jeopardizing the protection of the stockpiled topsoil materials. Certain site-specific conditions may accommodate the farmland protection in a slightly narrower space, leaving some of the temporary right-of-way unused. Nevertheless, the availability of the 90 feet for the construction of a 12 inch pipeline should be provided for the temporary periods of construction and restoration.