# **Periodic Review Report**

October 31, 2014—October 31, 2015 Reporting Period

Ameron Site 113 & 119 Colgate Avenue NYSDEC Site No. C915133

November 2015

0100-014-002

Prepared For:

National Oilwell Varco, Inc.

Prepared By:



2558 Hamburg Turnpike, Suite 300, Buffalo, New York | P: (716) 856-0599 | F: (716) 856-0583

## **PERIODIC REVIEW REPORT**

**OCTOBER 31, 2014 TO OCTOBER 31, 2015** 

AMERON INTERNATIONAL SITE 113-119 COLGATE AVENUE, BUFFALO, NY NYSDEC SITE NO. 915133

November 2015

0100-015-001

Prepared for:

## National Oilwell Varco, Inc.

Prepared By:



Benchmark Environmental Engineering & Science, PLLC 2558 Hamburg Turnpike, Suite 300 Buffalo, NY 14218 (716)856-0599

### PERIODIC REVIEW REPORT

## Ameron International Site

#### Table of Contents

1.0	<b>Int</b> 1.1	<b>RODUCTION</b> Background	
2.0	SITI	e Overview	6
3.0	Siti	e Management Plan	
	3.1	Groundwater Monitoring Plan	7
	3.2	Site Delisting	7
	3.3	Monitoring Well Decommissioning	
	3.4	Excavation Work Plan	
	3.5	Institutional Control Requirements and Compliance	
4.0	Cor	NCLUSIONS	10
5.0	Dec	CLARATION/LIMITATION	



## PERIODIC REVIEW REPORT Ameron International Site Table of Contents

#### FIGURES

- Figure 1 Site Location and Vicinity Map
- Figure 2 Remedial Locations
- Figure 3 Site Plan/December 2012 Well Locations and Isopotential Map

#### **APPENDICIES**

- Appendix A IC/EC Certification Form
- Appendix B Site Photographic Log (October 14, 2015)
- Appendix C Field Inspection Report



#### **1.0** INTRODUCTION

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this Periodic Review Report (PRR) on behalf of National Oilwell Varco, Inc. (NOV) to summarize the post-remedial status of New York State Department of Environmental Conservation (NYSDEC) Site No. 915133.

This PRR has been prepared in accordance with NYSDEC's DER-10 *Technical Guidance for Site Investigation and Remediation.* The NYSDEC's Institutional and Engineering Controls Certification Forms have been prepared for the Site (see Appendix A). This PRR and the associated inspections forms have been completed for the October 31, 2014 to October 31, 2015 reporting period.

#### 1.1 Background

The Site is located in the City of Buffalo, County of Erie, New York and is identified as 113-119 Colgate Avenue (SBL Nos. 133.62-2-1.11 and 133.62-2-25.11) on the Erie County Tax Map. The Site is an approximately 3.2-acre area bounded by Colgate Avenue to the north, light industrial properties to the south, residential properties along Colgate Avenue to the east, and commercial and industrial properties to the west (see Figures 1 and 2).

Beginning in approximately 1960 and continuing to 1982, Ameron International (Ameron) operated a protective coatings manufacturing facility on the subject property. During 1983 and 1984, environmental investigations revealed the presence of certain chemicals in soil and shallow groundwater beneath the western most portion of the former manufacturing building (Plant No. 1). As a result, in 1986 Ameron entered into an Order on Consent with the NYSDEC, whereby Ameron installed, maintained, and operated a sub-slab soil vapor extraction (SVE) system under the two westernmost rooms of Plant No. 1 for a 10-year period. The system was constructed and installed in 1988, approved by NYSDEC in 1989, and operated by Ameron through 1999.

At the conclusion of these remedial activities, Ameron sought delisting of the Site from NYSDEC's Registry of Inactive Hazardous Waste Sites. NYSDEC indicated that although the terms of the 1986 Order on Consent were completed to their satisfaction, insufficient data existed to establish that the remedial action goals had been attained.



Consequently, NYSDEC denied the delisting and required further investigation of the property.

In November 2001, Ameron retained AFI Environmental to conduct a limited subsurface Site investigation to confirm that SVE successfully remediated contaminants of concern to levels below the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 Recommended Soil Cleanup Objectives (RSCOs), which were the applicable guidance values at that time. The investigation results were reported in AFI's November 2001 report entitled Subsurface Soil Investigation and Water Analysis for MW-2.

In June 2004, Ameron retained AFI to conduct a supplemental Site investigation for the purpose of delisting the property prior to closing the USTs. Because no RCRA substances, listed hazardous substances, or contaminants of concern (other than petroleum) were identified, Ameron once again requested that the Site be delisted. The NYSDEC denied delisting of the property until the underground storage tank (UST) closure project was complete.

In August 2004, AFI prepared and submitted to the NYSDEC a Remedial Action Work Plan (RAWP) for the investigation and removal of the USTs. The NYSDEC-approved RAWP was implemented from October to December 2004. Remedial work involved removing, cleaning, and recycling 11 USTs and off-site landfill disposal of 2,839 tons of impacted soils from the western portion of the Site. The soil was disposed at a permitted landfill (Modern Landfill) under a "contained-in" hazardous waste management exclusion issued by NYSDEC. Post-excavation confirmatory sampling verified that cleanup goals were achieved. In April 2005, AFI issued a Remedial Action Work Report describing the UST and soil removal activities.

In December 2004, Ameron entered into an Order on Consent (Index #B9-0680-04-011) with NYSDEC to complete a records search for the property and a Remedial Investigation/Feasibility Study (RI/FS). The Order on Consent required preparation and implementation of an RI/FS Work Plan incorporating the elements of an RI/FS as set forth in the USEPA guidance document entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA," dated October 1988.

Ameron subsequently retained Benchmark to prepare and implement an RI/FS Work Plan. RI field activities were initially completed during the period of April 19 through May 3, 2006 in general accordance with the January 2006 NYSDEC-approved RI/FS Work Plan. Following review of the 2006 RI sample data, the NYSDEC required collection of additional



samples for lead and PCBs in surface soils, as well as collection of a groundwater sample for volatile organic compound (VOC) analysis. The supplemental sampling work was performed on January 3, 2007. Between October 2008 and March 2009, Benchmark completed a supplemental boring and groundwater investigation in the northwestern portion of the Site, down-gradient of the former UST field.

On November 3, 2009 a fire destroyed a portion of the on-site building referred to as Plant No. 1. Ameron undertook emergency demolition of all on-site structures with the exception of a 2-story building on the eastern side of the site, which remained in sound condition.

In fall 2010, the Site was remediated in accordance with the January 2010 NYSDECapproved Remedial Action Work Plan (RAWP). The following is a summary of the Remedial Actions performed at the Site (see Figure 2):

- 1. Excavation of soil/fill exceeding commercial SCOs for lead and PCBs. This required excavation in areas surrounding samples SS-1, SS-2, SB-3, and SB-5. Excavation areas were backfilled with topsoil from an NYSDEC-approved source, as was an area along the north side of the site for aesthetic purposes. Approximately 75 tons of materials were disposed offsite at the Waste Management, Inc. Chaffee Landfill in Chaffee, New York.
- 2. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
- 3. Remediation of groundwater through injection of Hydrogen Release Compound<sup>®</sup> (HRC<sup>®</sup>) to stimulate anaerobic bioremediation of the chlorinated VOCs surrounding temporary monitoring well TMW-2. This involved directly injecting 570 lbs. of HRC<sup>®</sup> into the contaminated groundwater using small diameter rods and a high-capacity hydraulic injection pump. A total of 16 delivery points spaced on 12.5-ft centers were used to treat the groundwater in this area.
- 4. Remediation of groundwater through injection of Oxygen Release Compound<sup>®</sup> (ORC<sup>®</sup>) to stimulate aerobic bioremediation of the aromatic VOCs surrounding temporary monitoring well TMW-3. This involved directly injecting 750 lbs. of ORC<sup>®</sup> into the contaminated groundwater using small diameter rods and a high-capacity hydraulic injection pump. A total of 49 delivery points spaced on 10-ft centers were used to treat the groundwater in this area.
- 5. Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, and (3) reporting.



#### 2.0 SITE OVERVIEW

The Site is located in the City of Buffalo, County of Erie, New York and is identified as 113 and 119 Colgate Avenue (SBL Nos. 133.62-2-1.11 and 133.62-2-25.11) on the Erie County Tax Map. The Site is an approximately 3.2-acre area bounded by Colgate Avenue to the north, light industrial properties to the south, residential properties along Colgate Avenue to the east, and commercial and industrial properties to the west (see Figures 1 and 2). The boundaries of the Site are more fully described in the Environmental Easement.



### 3.0 SITE MANAGEMENT PLAN

A Site Management Plan (SMP) prepared by Benchmark for Ameron was approved by the NYSDEC in August 2012. The SMP includes, among other elements, an Engineering and Institutional Control Plan, a Groundwater Monitoring Plan, an Excavation Work Plan, and a copy of the Environmental Easement. A brief description of the components of the SMP is presented below.

#### 3.1 Groundwater Monitoring Plan

A network of monitoring wells was installed to monitor Site groundwater during the Remedial Investigation. Per the SMP, downgradient wells MW-2R, MW-3R, MW-4, and MW-7A (see Figure 3) were sampled and analyzed on a semi-annual basis for 2 years (4 events) following completion of remedial construction work. Samples were analyzed in the field for water quality parameters (i.e., pH, conductivity, temperature, turbidity, and dissolved oxygen) and in the laboratory for Target Compound List (TCL) VOCs via USEPA Method 8260B. Remaining existing wells were monitored for groundwater elevation to verify flow direction. Groundwater monitoring occurred in July 2011, December 2011, August 2012, and December 2012.

Concentration data for parameters detected during the 4 rounds of post-remedial monitoring was previously transmitted to the NYSDEC following each event, and was summarized in the PRR for the period of October 31, 2012 – October 31, 2013. Based on the data, which indicated no upward trending or significant offsite impact, the NYSDEC agreed to terminate groundwater monitoring following the December 2012 event.

#### 3.2 Site Delisting

On September 3, 2013, following a 60 day notice which included a 30-day public comment period, the Site was deleted from the registry of NY State Inactive Hazardous Waste Sites.



#### 3.3 Monitoring Well Decommissioning

In February 2014 all of the remaining onsite and offsite monitoring wells and piezometers were decommissioned. The decommissioning work was performed by Benchmark with assistance from a professional environmental drilling subcontractor, Earth Dimensions, Inc., in accordance NYSDEC Groundwater Monitoring Decommissioning Policy CP-43.

#### 3.4 Excavation Work Plan

An Excavation Work Plan (EWP) was included in the NYSDEC-approved SMP for the Site. The EWP provides guidelines for the management of soil and fill material during any intrusive actives that disturb soil/fill.

No evidence of intrusive activities or the placement of backfill materials was observed during the reconnaissance. The site has remained vacant and fenced off during the October 30, 2014 to October 30, 2015 reporting period.

#### 3.5 Institutional Control Requirements and Compliance

As detailed in the Environmental Easements filed with the Erie County, New York, several Institutional Controls (ICs) need to be maintained as a requirement of the Brownfield Cleanup Agreement for the Site. The Site is subject to the following ICs:

- Land-Use Restriction: The controlled property may be used for commercial and/or industrial use.
- Implementation of the SMP, including the Soil/Fill Management Plan, and Monitoring Plan (Groundwater monitoring obligations have been fulfilled).
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP.
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use.
- A soil vapor barrier and passive sub-slab depressurization system must be installed beneath any newly constructed buildings on the property.
- Vegetable gardens and farming on the property are prohibited.



A Site Inspection of the property was conducted by Mr. Thomas Forbes, P.E. of Benchmark on October 14, 2015. The inspection indicated that the property remained substantially vacant with no new buildings and a natural vegetative cover in areas not covered by concrete. One pre-existing building (i.e., 2 story former garage and office building) remains onsite but is vacant. No observable indication of post-remedial soil disturbance, vegetable gardens or farming was noted during the Site Inspection, nor was any observed use of site groundwater. Appendix A includes the completed NYSDEC Institutional and Engineering Controls Certification Form for the Site. Appendix B includes a photographic log from the October 14, 2015 Site Inspection. Appendix C is the completed Field Inspection Report.



#### 4.0 CONCLUSIONS

For the reporting period October 31, 2014 to October 31, 2015, Benchmark concludes that the Site was in compliance with the NYSDEC-approved August 2012 SMP at the time of the Site Inspection (October 14, 2015).



### 5.0 DECLARATION/LIMITATION

Benchmark Environmental Engineering & Science, PLLC personnel conducted the annual Site Inspection on October 14, 2015 for NYSDEC Site No. 915133 in Buffalo, New York in accordance with generally accepted practices. This Periodic Review Report complies with the scope of work provided to National Oilwell Varco, Inc. by Benchmark Environmental Engineering & Science, PLLC.

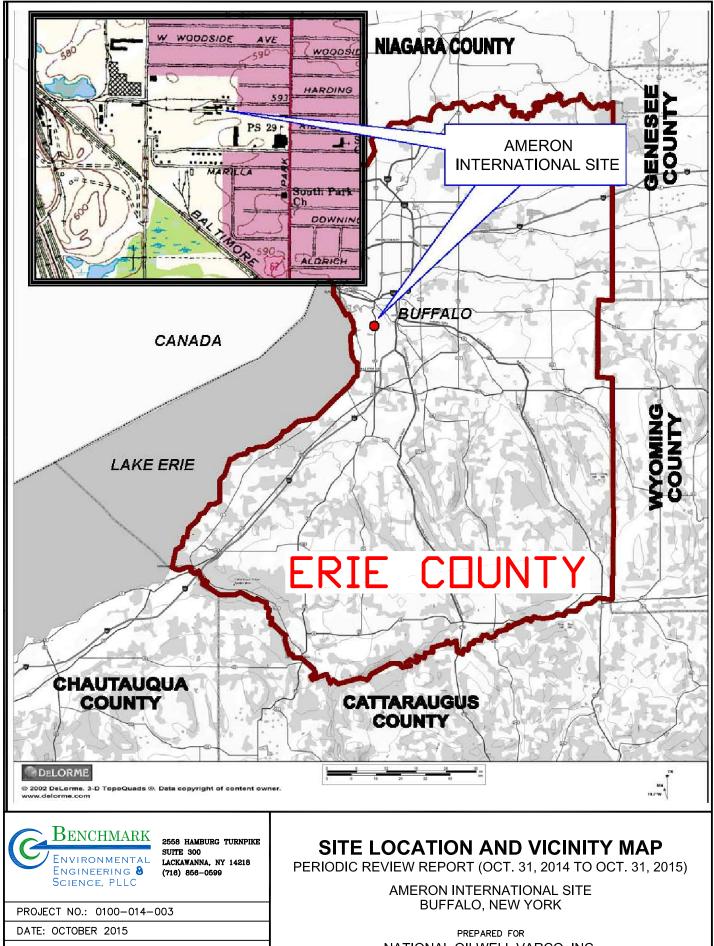
This report has been prepared for the exclusive use of National Oilwell Varco, Inc. The contents of this report are limited to information available at the time of the Site Inspection. The findings herein may be relied upon only at the discretion of National Oilwell Varco, Inc. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of Benchmark Environmental Engineering & Science, PLLC.



# FIGURES

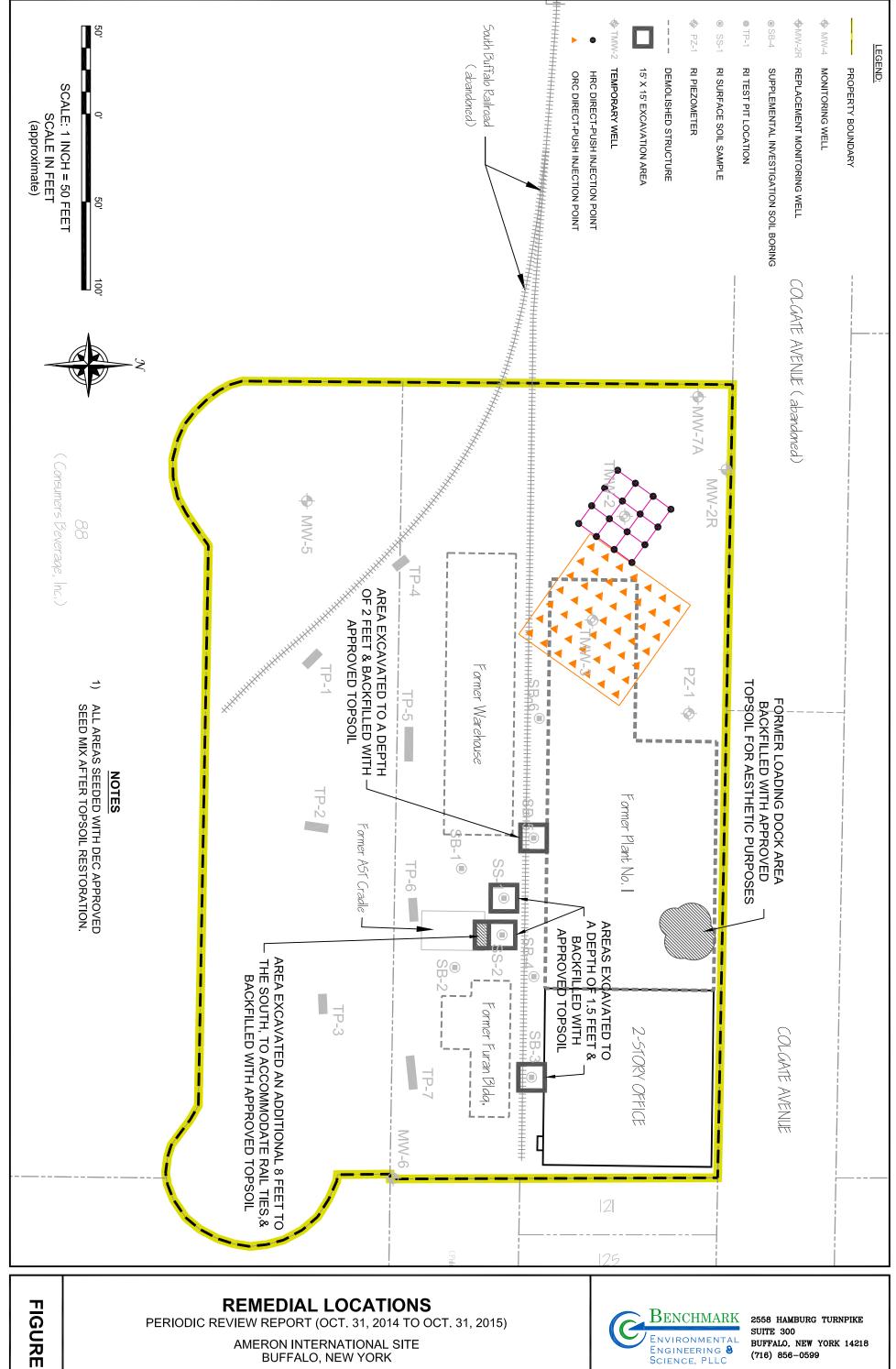


#### FIGURE 1



DRAFTED BY: BLR

### NATIONAL OILWELL VARCO, INC.



N

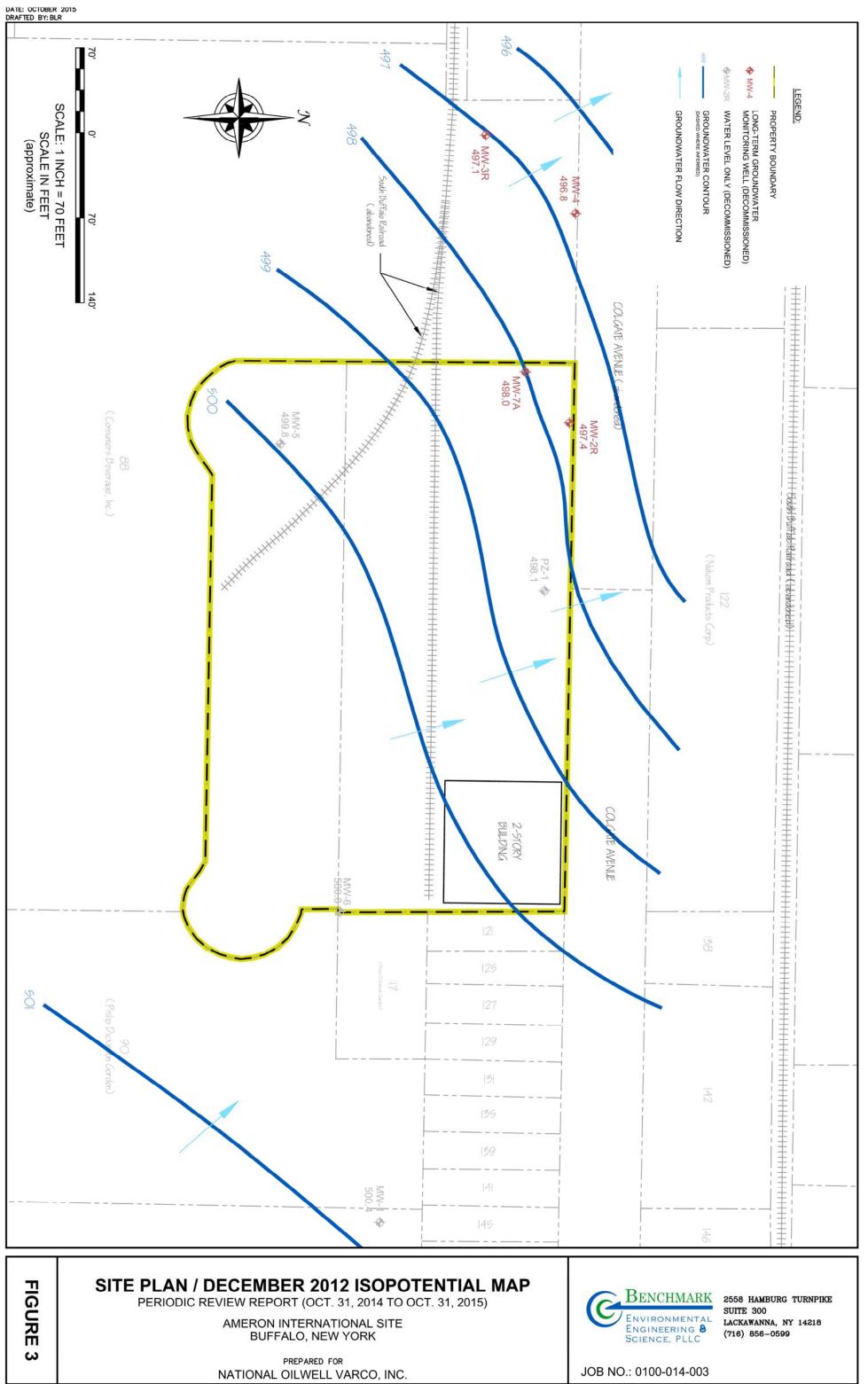
**BUFFALO, NEW YORK** 

PREPARED FOR NATIONAL OILWELL VARCO, INC.

Engineering 8 SCIENCE, PLLC

BUFFALO, NEW YORK 14218 (716) 856-0599

JOB NO.: 0100-014-003



# APPENDIX A

## INSTITUTIONAL & ENGINEERING CONTROL (IC/EC) CERTIFICATION FORMS





#### Enclosure 2 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



Sit	e No.	915133		Site Details		Box 1	I
Sit	e Name	e Ameron					
Cit Co	y/Town: ounty: Ei	Buffalo	9 Colgate Avenue	Zip Code: 142	20		
Re	porting	Period: Octobe	r 31, 2014 to Octobe	er 31, 2015			
						YES	NO
1.	Is the	information abov	ve correct?			Х	
	If NO,	include handwri	tten above or on a s	eparate sheet.			
2.			site property been s uring this Reporting		erged, or undergone	ea □	Х
3.		nere been any ch NYCRR 375-1.1	ange of use at the s 1(d))?	site during this Rep	orting Period		Х
4.			e, and/or local permi uring this Reporting		ischarge) been issu	ed □	Х
			to questions 2 thru has been previously				
5.	Is the	site currently un	dergoing developme	ent?			Х
						Box 2	2
						YES	NO
6.		current site use hercial and Indus	consistent with the u trial	use(s) listed below?		Х	
7.	Are all	ICs/ECs in plac	e and functioning as	s designed?		Х	
	IF		TO EITHER QUESTI MPLETE THE REST				
A Corr	ective N	leasures Work F	lan must be submit	ted along with this	form to address the	ese issues.	
Sig	nature o	of Owner, Remed	ial Party or Designate	ed Representative	Date	e	

SITE NO. 915133			Box 3
Description of I	nstitutional Controls		
Parcel 133.62-2-1.11	<u>Owner</u> National Oilwell Varco Inc	Institutional Control Landuse Restriction Soil Management Plan IC/EC Plan Site Management Plan	
			Both
133.62-2-25.11	National Oilwell Varco Inc.	Soil Management Plan Landuse Restriction Site Management Plan IC/EC Plan	
			Both
Description of E	Engineering Controls		Box 4
None Required			
Not Applicable/No EC's			

	Box 5
	Periodic Review Report (PRR) Certification Statements
1.	I certify by checking "YES" below that:
	a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
	b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted and the information processes and experts.
	engineering practices; and the information presented is accurate and compete. YES NO
	Х
2.	If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:
	(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
	(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
	(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
	(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
	(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.
	YES NO
	Х
	IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.
	A Corrective Measures Work Plan must be submitted along with this form to address these issues.
	Signature of Owner, Remedial Party or Designated Representative Date

IC CERTIFICATIONS
SITE NO. 915133
Box 6
SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.
I Jeffrey DMann at 7909 Portugued Circle, Houstern, Tx print name print business address 77036
am certifying as
for the Site named in the Site Details Section of this form. Signature of Owner, Remedial Party, or Designated Representative Date Rendering Certification

IC/EC CERTIFICATIONS
Qualified Environmental Professional Signature
I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.
print name Benchmark Environmental Engineering print name at 2558 Hamburg TPK BJATALO, NY 14218,
am certifying as a Qualified Environmental Professional for the Ourcomedial Party)
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

# **APPENDIX B**

## SITE PHOTOGRAPHIC LOG (OCTOBER 14, 2015)





Photo No.	Date	and the second
2	10/14/15	
Direction Photo	o Taken:	the second s
East		
		Mark - Balance - State -
Description:		The second second second second
Site Conditions	<ul> <li>Existing building</li> </ul>	The second second second
		A TRACE AND A CONTRACT OF A DECIMAL OF A DEC
		The second s

Prepared By: THF

BENCHN ENVIRONM ENGINEERI SCIENCE, P	ENTAL NG 🔓	РНОТС	OGRAPHIC LOG
Client Name		Site Location:	Project No.:
National Oilwe	II Varco	Ameron Site: 113-119 Colgate Ave, Buffalo, NY	0100-015-001
Photo No.	Date	Contraction of Contractioned	
3	10/14/15		
Direction Photo North	o Taken:		A CARACTER
Description: Site Conditions toward site entra			

Photo No.	Date	
4	10/14/15	
Direction Photo Northeast	o Taken:	
Description: Southwest corn building	er of existing	

Prepared By: \_\_\_\_\_ THF



Photo No.	Date	
6	10/14/15	States 1.
Direction Photo East	o Taken:	
Description: Area of prior rer and neighboring	nedial excavation g residence	

Prepared By: THF

# **APPENDIX C**

FIELD INSPECTION REPORT





### Field Inspection Report Post-Remedial Operation & Maintenance Plan

Property Name: Ameron Site	Project No.: 0100-015-01
Client: National Oilwell Varco	
Property Address: 113 & 119	Colgate Avenue, Buffalo, NY
Property ID: (Tax Assessment Map)	133.62-2-1.11 & 133.62-2-25.11, respectively
Preparer T. Forbes	Date/Time: 10-14-14; 15:00

#### CERTIFICATION

The results of this inspection were discussed with the Site Owner. Any corrective actions required have been identified and noted in this report. Plans for any required corrective actions have been discussed with the Site Owner and will be formalized in a Corrective Action Plan for NYSDEC review

Preparer / Inspector: Thomas Forbes, P.E.			Date:	1044-15
Signature: 7 2000 Freeze	10.115			
Next Scheduled Inspection Date: October 2015				
Property Access				
. Is the access road in need of repair?		yes	🔄 no	□ N/A
. Sufficient signage posted (No Trespassing)?		yes	🗆 no	☑ N/A
. Has there been any noted or reported trespassing?		yes	⊡ no	□ N/A
Please note any irregularities/ changes in site access ar	nd sec	curity:		
No irregularities; fencing along Colgate remains intact			gate	

#### Final Surface Cover / Vegetation

The integrity of the vegetative soil cover or other surface coverage (e.g., asphalt, concrete) over the entire Site must be maintained. The following documents the condition of the above.

1.	Final Cover is in Place and in good condit	ion?		yes		no	1	N/A
	Cover consists of (mainly): Engine	ered cov	/er	not require	d; hov	vever site is o	ov	ered with
		ted soil a	anc	competen	t conc	rete pad		
2.	Evidence of erosion?	I		yes	7	no		N/A
3.	Cracks visible in pavement?	l		yes		no	V	N/A
4.	Evidence of distressed vegetation/turf?	ļ		yes	J	no		N/A
5.	Evidence of unintended traffic and/or ruttin	ng? j		yes	J	no		N/A
6.	Evidence of uneven settlement and/or por	nding?		yes	I	no		N/A



Final Surface Cover / Vegetation			
<ol><li>Damage to any surface coverage?</li></ol>	yes	🗌 no	☑ N/A

If yes to any question above, please provide more information below.

Gas Vent System Monitoring and Maintenance						
Are there signs of stressed vegetation around gas vents?	□ yes	🗆 no	☑ N/A			
Are the gas vents currently intact and operational?	🗆 yes	🗌 no	☑ N/A			
Has regular maintenance and monitoring been documented and enclosed or referenced?						
, , , , , , , , , , , , , , , , , , ,	□ yes	🗆 no	☑ N/A			
Groundwater Monitoring						
Is there a plan in place and currently being followed?	🗋 yes	🗆 no	☑ N/A			
Are the wells currently intact and operational?	□ yes	🗆 no	☑ N/A			
When was the most recent sampling event report and submitta	l? Date:	December	2012			
When is the next projected sampling event? Date: <u>NA Wells Decommissioned Feb 2014</u>						
Property Use Changes / Site Development						
Has the property usage changed, or site been redeveloped sind	ce the last in	spection?				
	□ yes	⊡ no	□ N/A			
If yes, please list with date:						



#### **New Information**

Has any new information been brought to the owner/engineer's attention regarding any and/or all engineering and institutional controls and their operation and effectiveness?						
	🗋 yes	🗾 no	□ N/A			
Comments:						
This space for Notes and Comments						
Please include the following Attachments:						
1. Site Sketch						
2. Photographs						