



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

June 15, 2015 (EKW)
GeoTracker Global ID: T0609560708

BRAC Program Management Office West
Attn. Ms. Janet Lear
1455 Frazee Road, Suite 900
San Diego, CA 92108
Via email: janet.lear@navy.mil

Subject: No Further Action for Building 965 Former Aboveground Storage Tank (AST), Former Mare Island Naval Shipyard, Vallejo, Solano County

Dear Ms. Lear:

This letter confirms that based on the available information, and with the provision that the information provided is accurate and representative of site conditions, site investigation and corrective actions are complete and no further action (NFA) is required for the site below.

Site Name	GeoTracker Case ID
Building 965 Former AST	T10000005995

Basis and Assumptions

This NFA status applies only to releases of petroleum fuel and fuel constituents associated with the site referenced above. While the information provided indicates that the above-referenced site is satisfactorily cleaned up to standards consistent with commercial/industrial land use, we may reconsider these findings should land use change or new information be discovered regarding previously undetected contamination.

The extent of petroleum hydrocarbons in soil at the Building 965 former aboveground storage tank (AST) is limited. Groundwater was not investigated because the petroleum hydrocarbons detected in shallow soil decreased in concentration with depth, are not in contact with shallow groundwater (greater than 8 feet below ground surface), and are expected to biodegrade over time.

Conditions/Requirements

Residual petroleum contamination remains in the subsurface. To ensure protection of public health, safety, or the environment, and to be consistent with the land use assumptions above, the following conditions/requirements apply:

- No residential land use: The site cannot support residential use due to potentially unacceptable direct contact risk from residual petroleum contamination in shallow soil.
- No grading, excavation, or subsurface activities without a soil management plan: Any work involving soil excavation and trenching or contact must be conducted pursuant to a soil management plan that is acceptable to Regional Water Board staff. The plan must include procedures for proper notification, handling, and disposal of any potentially contaminated soil encountered during construction or removed from the site. Current and future site workers, tenants, and landowners must be notified of the soil management requirements for the property.
- Notify Regional Water Board – land/groundwater use change: The Regional Water Board should be notified in writing of any proposed change in land use at the site. Formal Regional Water Board concurrence may be required.

Land Use Controls/Covenants

This NFA status would typically require a deed restriction to secure the above conditions and requirements necessary to protect public health, safety, or the environment. However, in this case, the Regional Water Board does not require a deed restriction for this site because of the reasons presented below.

1. The Building 965 former AST site is located within the larger Defense Reutilization and Marketing Office (DRMO) South site. The DRMO South is being evaluated under the CERCLA¹ program with lead environmental oversight from the Department of Toxic Substances Control (DTSC). Based on results of sampling conducted at the DRMO South, it is anticipated that DTSC will require institutional controls as part of the DRMO South site remediation and closure, including but not limited to a land use covenant restricting site use from residential use.
2. The site is zoned as commercial/industrial and a change in land use is not reasonably anticipated in the future.

Closing

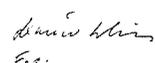
The Regional Water Board may require a separate cost recovery agreement for regulatory oversight with a future landowner in order to evaluate the above work plans and conditions or to review any proposed change in land use.

¹ CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act

No Further Action for Building 965 Former AST
Former Mare Island Naval Shipyard

Attached please find the site closure summary. Please contact Elizabeth Wells of my staff at (510) 622-2440 or EWells@waterboards.ca.gov if you have any questions regarding this matter.

Sincerely,


For: David Elias
2015.06.15
15:37:30 -07'00'

Bruce H. Wolfe
Executive Officer

Attachment: Site Closure Summary Form

Distribution (via Email):

Department of the Navy

Ms. Heather Wochnick – heather.wochnick@navy.mil

Mr. Nicholas Shih – nicholas@MAARScorp.com

Department of Toxic Substances Control

Mr. Patrick Hsieh – patrick.hsieh@dtsc.ca.gov

U.S. Environmental Protection Agency

Ms. Carolyn D'Almeida – dAlmeida.carolyn@epa.gov

EERG

Ms. Virginia Demetrios – virginia.demetrios@errg.com

SITE CLOSURE SUMMARY
BUILDING 965 FORMER AST

June 15, 2015

1. AGENCY INFORMATION	
Agency Name: SF Bay Regional Water Quality Control Board	Address: 1515 Clay Street, Suite 1400
City/State/Zip: Oakland, CA 94612	Phone: (510) 622-2440
Responsible Staff Person: Elizabeth Wells	Title: Water Resource Control Engineer
Division: Groundwater Protection	Program: DoD

2. SITE AND FILE INFORMATION	
Site Name: Building 965 Former Aboveground Storage Tank (AST)	
Parent Military Base: Former Mare Island Naval Shipyard	
Site Address: Azuar Street and Dump Road, within Defense Reutilization and Marketing Office (DRMO) South	
Site Latitude (decimal degrees): 38.1011	Longitude: -122.2787
Site Type: Military Cleanup Site	
WB Case No.: NA	GeoTracker Case ID: T10000005995
WB File No. : 2129.2011	Paperless Office ID: T0609560708

3. RESPONSIBLE PARTY:
<p>Company/Agency: Base Realignment and Closure Program Management Office West Contact Name: Ms. Janet Lear Contact Title: BRAC Environmental Coordinator Street Address: 1455 Frazee Road, Suite 900 City, State, Zip Code: San Diego, CA 92108 Tel. No.: (619) 532-0976 E-mail: janet.lear@navy.mil</p>
<p>-----</p> <p>Company/Agency: Base Realignment and Closure Program Management Office West Contact Name: Mr. Nicholas Shih Contact Title: Remedial Project Manager Street Address: 1455 Frazee Road, Suite 900 City, State, Zip Code: San Diego, CA 92108 Tel. No.: (619) 532-0904 E-mail: nicholas@MAARScorp.com</p>

SITE CLOSURE SUMMARY BUILDING 965 FORMER AST

4. SITE DESCRIPTION, LAND USE, AND BENEFICIAL USE
<p>Site Size and Description: The 500-gallon AST was located outside the northwest side of Building 965 in the DRMO South. The AST was used to fuel an emergency generator. It was removed in 1995. During a 1996 site inspection, no evidence of the tank, including a containment area or staining, was observed at the former tank location.</p>
<p>Vicinity: The site and vicinity are flat. The nearest surface water body is a non-tidal wetland located approximately 1600 feet northwest of the site. Mare Island Strait is located approximately 2300 feet east of the site.</p>
<p>Site Plan Map Attached: Yes</p>
<p>Current Site Use(s): Commercial/Industrial</p>
<p>Future Land Use(s): Commercial/Industrial</p>
<p>Beneficial Uses: Freshwater replenishment, groundwater recharge, industrial service supply.</p>
<p>Exception to Sources of Drinking Water Policy: Exception for shallow groundwater for municipal and domestic use (<i>Concurrence with Exception to Sources of Drinking Water Policy, Shallow Groundwater at Defense Reutilization and Marketing Office (DRMO), DRMO South, and Crane Test Area North, Former Mare Island Shipyard, Vallejo, Solano County, Regional Water Board, December 16, 2013</i>).</p>

5. RELEASE INFORMATION						
Source (e.g., UST, AGT, pipeline, sump, wash rack, etc.)	Capacity or dimensions	Contents	How Closed?	Date	Latitude (decimal degrees)	Longitude (decimal degrees)
Building 965 Former AST	500 gallons	Diesel	Removed & disposed off site	1995	38.1011	-122.2787

SITE CLOSURE SUMMARY BUILDING 965 FORMER AST

6. SITE CHARACTERIZATION AND CONCEPTUAL SITE MODEL

Cause and description of release: The AST stored diesel fuel and was used to support an emergency generator. The AST was cleaned and removed in 1995. During a 1996 site inspection, no containment structure was observed and no visible signs of releases were observed.

Characterization: No sampling was conducted as part of the AST removal activities. In 2012, the Navy conducted a site investigation of the entire DRMO South. One boring was advanced at the location of the former AST and soil samples from 1 and 7 feet below ground surface (bgs) were analyzed for total petroleum hydrocarbons (TPH) as diesel (TPH-d), as motor oil (TPH-mo), and as gasoline (TPH-g); metals; polychlorinated biphenyls (PCBs); semi-volatile organic compounds (SVOCs); and VOCs. TPH-g, PCBs, SVOCs, and VOCs were either not detected or detected at concentrations less than screening levels (ESLs). Lead was detected at a concentration less than its screening levels (ESL). TPH-d was detected only in the 1-foot sample, at a concentration less than cleanup standards. TPH-mo was detected in both the 1- and 7-foot samples (760 and 27 milligrams per kilogram (mg/kg), respectively). Results of soil samples collected from borings advanced near the UST as part of the greater site investigation show lower concentrations of TPH-mo, showing the extent of impact is laterally limited. Groundwater was encountered at 8 feet bgs during drilling.

Groundwater (GW)	Depth to first GW: 8 ft bgs
	GW gradient direction: West
	GW sampled?: No
GW monitoring wells	GW monitoring wells installed?: No
	Total number of monitoring wells used in support of closure decision: 0
	Status of MWs: NA

7a. CLEANUP STANDARDS AND SITE REMEDIATION

Describe basis for cleanup standards: Cleanup standards were based on commercial/industrial land use and no drinking water beneficial use of groundwater.

Describe risk-based approach to develop cleanup standards: Cleanup standards for soil were based on the Water Board's Environmental Screening Levels (ESLs).

Describe remediation efforts for soil and groundwater: No remediation was performed.

**SITE CLOSURE SUMMARY
BUILDING 965 FORMER AST**

7b. RESIDUAL (MAX) CONTAMINANT CONCENTRATIONS						
CONTAMINANT	SOIL (ppm)		GW (ppb)		SOIL VAPOR (ppb or ug/m³)	
	<i>Residual</i>	<i>Industrial ESL</i>	<i>Residual</i>	<i>Industrial ESL</i>	<i>Residual</i>	<i>Industrial ESL</i>
TPH-gasoline	ND (<0.42)	500	NS	-	NS	--
TPH-diesel	49	110	NS	-	NS	--
TPH-motor oil	760	500	NS	-	NS	--
Benzene	ND (<0.00072)	1.2	NS	-	NS	--
Toluene	ND (<0.00072)	9.3	NS	-	NS	--
Ethylbenzene	ND (<0.00072)	4.7	NS	-	NS	--
Xylenes	ND (<0.00072)	11	NS	-	NS	--
MTBE	NS	8.4	NS	-	NS	--
Naphthalene	ND (<0.0014)	4.8	NS	-	NS	--
Lead	195	320	NS	-	NS	--

ESLs for shallow soil (Table B-2) where groundwater is not a current or potential drinking water source.

8. CLOSURE CRITERIA CHECKLIST (include comments as necessary)
<p>1a Pollutant sources are identified and evaluated</p> <ul style="list-style-type: none"> √ <i>Leak/spill sources (tanks, sumps, pipelines, etc.) are identified and controlled</i> √ <i>The pollutant source zone (sorbed/entrained residual pollutants and free product that sustain groundwater & vapor plumes) is identified and delineated</i>
<p>Comments: Yes. Primary source (AST) was removed.</p>
<p>1b The site is adequately characterized</p> <ul style="list-style-type: none"> √ <i>Site history, hydrology, and hydrogeology are characterized</i> √ <i>The nature & extent (lateral and vertical) of pollutants are characterized in soil, groundwater & soil gas, as necessary</i>
<p>Comments: Yes.</p>
<p>1c Exposure pathways, receptors, and potential risks, threats, and other environmental concerns are identified and assessed</p>

SITE CLOSURE SUMMARY BUILDING 965 FORMER AST

- √ *Nearby receptors (wetlands, streams, wells, homes, schools, businesses, etc.) are identified*
- √ *Groundwater & vapor migration/exposure pathways, natural & artificial (storm drains, sewer lines, buried channels, abandoned wells, etc.) are assessed*
- √ *Reasonably anticipated land and water use scenarios have been considered*
- √ *Actual and potential risks to receptors and adverse effects to beneficial uses are assessed*

Comments: Yes. There are no water supply wells on Mare Island. The nearest surface water receptor is the wetlands area located approximately 1600 feet northwest of the site. Concentrations of TPH-mo decreased with depth to below its screening level. Groundwater was not encountered during drilling.

2a Pollutant sources are remediated to the extent feasible

- √ *The technical and economic feasibility of source remediation methods/technologies have been evaluated*
- √ *Feasible source remediation technologies have been implemented*
- √ *Appropriate source remediation performance monitoring has been conducted*
- √ *Source mass removal has been documented*
- √ *The effects of source remediation on groundwater/vapor plume behavior have been evaluated*

Comments: NA

2b Unacceptable risks to human health, ecological health, and sensitive receptors, considering current and future land and water uses, are mitigated

- √ *Necessary & appropriate corrective actions have been implemented*
- √ *Confirmation sampling, monitoring, and/or risk management measures demonstrate that risks are mitigated*

Comments: Yes. Only TPH-mo detected in one sample at concentration greater than screening level. Lateral and vertical extent in soil is defined and limited and elevated petroleum does not extend to groundwater.

2c Unacceptable threats to groundwater and surface water resources, considering existing and potential beneficial uses, are mitigated

- √ *Necessary & appropriate corrective actions have been implemented*
- √ *Confirmation sampling, monitoring, and/or risk management measures demonstrate that threats are mitigated*

Comments: Yes. Only TPH-mo detected in one sample at concentration greater than screening level. Lateral and vertical extent in soil is defined and limited and elevated petroleum does not extend to groundwater.

3a Groundwater plumes are stable or decreasing¹

- √ *Appropriate plume monitoring has confirmed the lateral and vertical extent over time*
- √ *Spatial and temporal trends for pollutants, including parent and breakdown products, have*

**SITE CLOSURE SUMMARY
BUILDING 965 FORMER AST**

<p><i>been evaluated</i></p> <ul style="list-style-type: none"> √ <i>Spatial and temporal trends for natural attenuation indicators have been evaluated</i> √ <i>Evidence of breakdown to acceptable end products is documented</i> √ <i>Plume concentrations are decreasing and the plume is not moving or expanding</i>
<p>Comments: NA. Elevated petroleum detected in shallow soil only and does not extend to groundwater.</p>
<p>3b Cleanup standards have been met or can be met in a reasonable timeframe</p> <ul style="list-style-type: none"> √ <i>The estimated timeframe to achieve cleanup standards throughout the affected area is evaluated</i> √ <i>The anticipated timeframe for beneficial use of the affected and nearby water resources is evaluated</i> √ <i>The potential to adversely affect beneficial uses is assessed considering cleanup and beneficial use timeframes, hydrogeologic conditions, and the CSM</i>
<p>Comments: Yes. Elevated petroleum detected in shallow soil only and does not extend to groundwater. It is anticipated that residual concentrations will biodegrade in a reasonable timeframe.</p>
<p>3c Risk management measures are appropriate, documented, and do not require future Water Board oversight</p> <ul style="list-style-type: none"> √ <i>Necessary risk management measures (land use restrictions, engineered vapor barriers, soil management plans, etc.) are implemented and documented</i> √ <i>Risk management measures do not require future Water Board oversight</i>
<p>Comments: NA.</p>

¹ For petroleum groundwater plumes, stability is usually a sufficient criterion. For solvent or other non-petroleum groundwater plumes, closure should be supported by evidence of a decreasing plume in time and space.

<p>9. NFA BASIS AND ASSUMPTIONS</p>
<p>This no further action (NFA) status applies only to release of petroleum fuel and fuel constituents at the subject site.</p> <p>Cleanup standards for this site were based on commercial/land use.</p> <p>We may reconsider this NFA status should new information be discovered regarding previously undetected contamination.</p> <p>Although petroleum hydrocarbons were detected in surface soil in one sample at a concentration greater than screening levels, the extent is limited, elevated concentrations are not in contact with groundwater (which is greater than 8 feet below ground surface), and the hydrocarbons are expected to biodegrade.</p>

**SITE CLOSURE SUMMARY
BUILDING 965 FORMER AST**

10a. NFA CONDITIONS/REQUIREMENTS
<p>The site cannot support residential land use due to potentially unacceptable direct contact risk from residual petroleum contamination in shallow soil.</p> <p>Any work involving soil excavation and trenching or contact must be conducted pursuant to a soil management plan that is acceptable to Regional Water Board staff.</p> <p>The Regional Water Board must be notified in writing of any proposed change in land and groundwater use at the site.</p>
10b. LAND USE CONTROLS/COVENANTS
None

11. ADDITIONAL COMMENTS
None

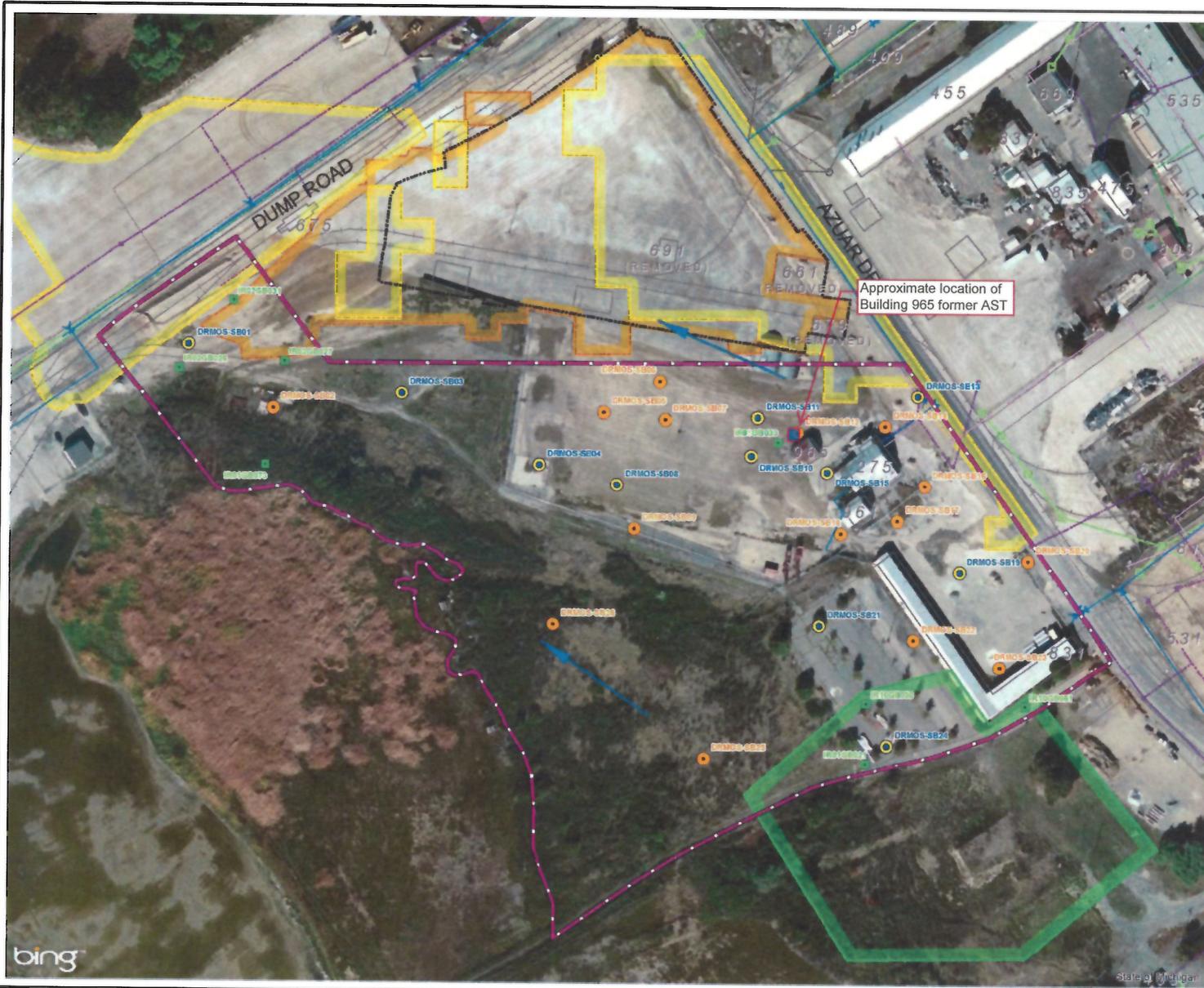
12. TECHNICAL REPORTS, CORRESPONDENCE, ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON	
REPORTS ON FILE	Where is report(s) filed?: Regional Water Board, Oakland
Final Preliminary Assessment and Site Inspection Report, Defense Reutilization and Marketing Office South, Trevet	February 2014
Building 965 Former Above Ground Storage Tank Information for Closure, Defense Reutilization and Marketing Office South, Department of the Navy	May 2014

Attachments: Site Plan

Notes and Abbreviations:

- AST – Aboveground Storage Tank
- GW – Groundwater
- NFA – No Further Action
- TPH – Total Petroleum Hydrocarbons

Doc: 12/10/2013 - Proj: NUGS - Present/Manufacturing_CTA_DRMO_PASB_111317.dwg - DRMO - NUGS - SITE - DRMO - R4.mxd



LEGEND

- SOIL SAMPLING LOCATION
- SOIL AND GROUNDWATER SAMPLING LOCATION
- PREVIOUSLY COLLECTED SAMPLE LOCATIONS
- GROUNDWATER FLOW DIRECTION
- FENCED SCRAP YARD AREA
- DRMO SOUTH SITE BOUNDARY
- PCAP EXCAVATION FOOTPRINT
- DRMO NTCRA BOUNDARY
- IR SITE 10
- NAVY HISTORICAL BUILDING
- ELECTRICAL LINES
- SALTWATER PIPELINES
- GAS PIPELINES
- SANITARY SEWER PIPELINES
- WATER PIPELINES
- STORM DRAIN LINES
- INDUSTRIAL WASTE PIPELINES
- Approximate Former AST Location

NOTES:
 DRMO - DEFENSE REUTILIZATION AND MARKETING OFFICE
 IR - INSTALLATION RESTORATION
 NTCRA - NON-TIME CRITICAL REMOVAL ACTION
 PCAP - PETROLEUM CORRECTIVE ACTION PLAN

GRAPHIC SCALE
 0 75 150 300
 Feet
 (IN FEET)
 1 INCH = 150 FEET

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND

SAN DIEGO, CALIFORNIA
NAVFAC

PRELIMINARY ASSESSMENT / SITE INSPECTION
 DEFENSE REUTILIZATION AND MARKETING OFFICE - SOUTH
 FORMER MARE ISLAND NAVAL SHIPYARD, VALLEJO, CA

FIGURE 1
SITE MAP

TRENET DATE: DECEMBER 2013
 CONTRACT NUMBER NO: N62473.11-C-2406

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State of Michigan