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# No Department of Defense Action Indicated Report

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Containerized Hazardous, Toxic, or Radioactive Waste  
Project # F10AK1016-04  
Haines-Fairbanks Pipeline Milepost 347  
Gate Valve #45  
Near Alaska/Canada Border, Alaska

Final

May 2015



Prepared By:  
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## **1.0 INTRODUCTION**

The Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) authorizes the cleanup of contamination resulting from past military activities at sites no longer owned by the Department of Defense (DOD). A hazardous, toxic, and radioactive waste (HTRW) project (F10AK1016-01) was authorized for the Haines-Fairbanks Pipeline (HFP) in 2002. The Haines-Fairbanks Pipeline was formerly used by the DOD and determined to be eligible for cleanup under the DERP-FUDS. In 2012, a revised Inventory Project Report (INPR) was completed to modify the existing -01 HTRW project and add 13 containerized hazardous, toxic, and radioactive waste (CON/HTRW) projects (F10AK1016-02 through -14). As part of the 2012 HFP INPR revision, a separate CON/HTRW project (F10AK1016-04) was established for Haines-Fairbanks Pipeline Mileposts 347 and 399.5, also known as Gate Valve #45 and Gate Valve #49, respectively. In 2015, a follow-on INPR revision was completed in part to separate the Gate Valve #49 Site into a newly-created CON/HTRW project (F10AK1016-16). The Gate Valve #45 Site was left under the F10AK1016-04 project.

Based on the results of several environmental investigations and a contaminated soil removal action at the Gate Valve #45 Site, the F10AK1016-04 CON/HTRW project of the Haines-Fairbanks Pipeline is being recommended for closure and No DOD Action Indicated (NDAI) status.

The United States Army Corps of Engineers (USACE) is an agent for the Department of Defense and has been assigned the responsibility of coordinating activities at Formerly Used Defense Sites. This NDAI report is issued by the United States Army Corps of Engineers, Alaska District (USACE-AK); the lead agency for the Haines-Fairbanks Pipeline FUDS.

## **2.0 SUMMARY OF SITE CONDITIONS**

### **2.1 Haines-Fairbanks Pipeline History**

The USACE was responsible for pipeline design and construction. The HFP, its five pumping stations, and two associated bulk storage terminals were constructed by private contractors with oversight from USACE over a period of 22 months from 1953 to 1955. The HFP was built to transport fuels from the port at Haines, Alaska, to the military bases in interior Alaska. The pipeline was run by federal civilians supervised by the Petroleum Division on Fort Richardson. Four types of fuel were transported through the pipeline including diesel, automotive gas, jet fuel, and aviation gas; however the majority of the fuel transported was jet fuel (JP4). Much of the 8-inch diameter pipeline was laid on the ground surface, although approximately 96 miles of the HFP near Delta Junction, Alaska, and most of the 42 miles of HFP between the Haines Fuel Terminal and the Canadian border were buried. Other portions of the HFP were also buried, although these intervals were short and intermittent.

Originally, the HFP was constructed with five pump stations located at Haines and Tok, Alaska, and Border, Haines-Junction, and Donjek in Yukon Territory, Canada. Bulk fuel storage facilities were also constructed at Haines and Tok, Alaska. Six new pump stations were added to

the HFP in 1962 in response to increased military fuel demands. The new pump stations were located at Blanchard River, Destruction Bay, and Beaver Creek in Yukon Territory, Canada, and at Lakeview, Sears Creek, and Timber, Alaska.

The Haines-to-Tok section of the pipeline was shut down in July 1971. In 1973, the Tok-to-Eielson section of the HFP was deactivated. The bulk fuel storage facilities in Haines and Tok, Alaska, continued to operate until 1979, when the U.S. Army closed the Tok fuel storage facility. The Tok-to-Fairbanks section of the HFP was briefly reactivated to pump the remaining fuel from the station. All of the fuel was removed from the Tok terminal in July 1979 and the pipeline was shut down. Most of the unused pipeline has been removed or salvaged by non-military entities.

The HFP was plagued with leaks from corrosion, ice damage, and vandalism (e.g., bullet holes) throughout its operational history. Underground portions of the pipeline experienced damage from broken welds and at least one accidental breach from borehole drilling. Ice plugs formed in the pipeline during system startup and resulted in spills at a number of sites; however, most of these ice plugs were located in Canadian sections of the pipeline (CRREL 1972).

## **2.2 Site Location and Background**

The Haines-Fairbanks Pipeline extends a total of 626 miles from Haines, Alaska, through the Canadian provinces of British Columbia and the Yukon Territory, through Tok, Alaska, and up to Fairbanks, Alaska. The pipeline route generally parallels the Haines Highway from Haines, Alaska, to Haines Junction, Yukon Territory. It then follows the Alaska Highway to Delta Junction, Alaska, continuing along the Richardson Highway to Fort Wainwright, Alaska. Approximately 52 percent of the pipeline route lies within United States territory.

### Pipeline Milepost 347 (Gate Valve #45 Site)

The Gate Valve #45 Site is located at Haines-Fairbanks Pipeline Milepost (PMP) 347, Alaska Highway Milepost (AHMP) 1230.3. The site is underlain by permafrost of various depths and consists of thick vegetation dominated by black spruce with boggy ponded areas. The Haines-Fairbanks Pipeline corridor is evident in the area by the absence of black spruce trees and generally has thinner vegetation. The gate valve, vault, and adjacent piping were removed during a 2014 soil removal action completed by North Wind Construction Services, LLC (North Wind).

## **3.0 REMOVAL ACTIVITIES**

Several environmental investigations and cleanup activities have occurred at various locations along the HFP since its closure in 1973. The most recent activities concerning the Gate Valve #45 Site occurred in 2007, 2008, 2011, and 2014.

CH2M HILL completed a site investigation at the Gate Valve #45 Site in 2007. Due to the presence of shallow groundwater and standing surface water, the vault and valve were not removed. One surface water sample and a duplicate sample were collected from within the vault and analyzed for gasoline-range organics (GRO), diesel-range organics (DRO), residual-range

organics (RRO), benzene, toluene, ethylbenzene, xylene (BTEX), and polycyclic aromatic hydrocarbons (PAHs). Analytical results for the water samples did not exceed the Alaska Department of Environmental Conservation (ADEC) groundwater cleanup levels for individual chemical constituents. However, surface water quality criteria were exceeded for total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) (CH2M HILL 2008).

USACE-AK completed eight rapid optical screening tool (ROST) probe points at the Gate Valve #45 Site in 2008. Probe depth ranged from 14 to 16 feet below ground surface (bgs). A diesel-type signature was identified at ROST probe GV45-01 from roughly 1.6 to 12.4 feet bgs. Fuel signatures were also identified at GV45-04, GV45-05, and GV45-06. All other probes appeared to contain only background fluorescence readings within this area. The maximum effective laser-induced fluorescence (LIF) reading occurred at GV45-01, with a value of 14.29%. The vertical and horizontal extent of petroleum contamination present at the site was not delineated during the ROST investigation. Accessibility was limited to the west due to the wet and marshy site conditions (USACE 2010).

Ten soil borings were drilled and 19 soil samples were collected during a 2011 remedial investigation completed by Fairbanks Environmental Services Inc. (FES). Soil contamination consistent with a jet fuel type contaminant was identified and delineated at the site. Soil contaminants of concern (COCs) included GRO, DRO, ethylbenzene, xylenes, and the PAH 2-methylnaphthalene. Groundwater samples were not collected since the site is underlain by permafrost and groundwater was not encountered. Contamination appeared to be centered on the gate valve vault and limited in extent (FES 2012).

North Wind completed a soil removal action at the Gate Valve #45 Site in June/July 2014. The gate valve, concrete vault, and several feet of adjacent piping were removed prior to the beginning of soil excavation. The excavation reached a maximum depth of 16 feet bgs in select locations and approximately 668 cubic yards of contaminated soil were removed and disposed of at Organic Incineration Technology, Inc. (OIT) in North Pole, Alaska. Confirmation soil samples from the excavation floor and sidewalls demonstrated that all contamination in excess of the applicable ADEC soil cleanup levels (Method Two Direct Ingestion/Inhalation) was removed and the site was recommended for no further action (North Wind 2015).

#### **4.0 SUMMARY OF REMEDY**

Based on the results of the aforementioned investigation efforts and cleanup activities, USACE-AK has recommended that no further action is required at the Gate Valve #45 Site (F10AK1016-04). This NDAI determination may be reevaluated in the event that additional information becomes available or that previously undiscovered and FUDS-eligible contamination is present at the site.

## 5.0 REFERENCES

CRREL, 1972. Preliminary Investigations of Petroleum Spillage, Haines-Fairbanks Military Pipeline, Alaska, April. (F10AK101601\_01.09\_0501\_a)

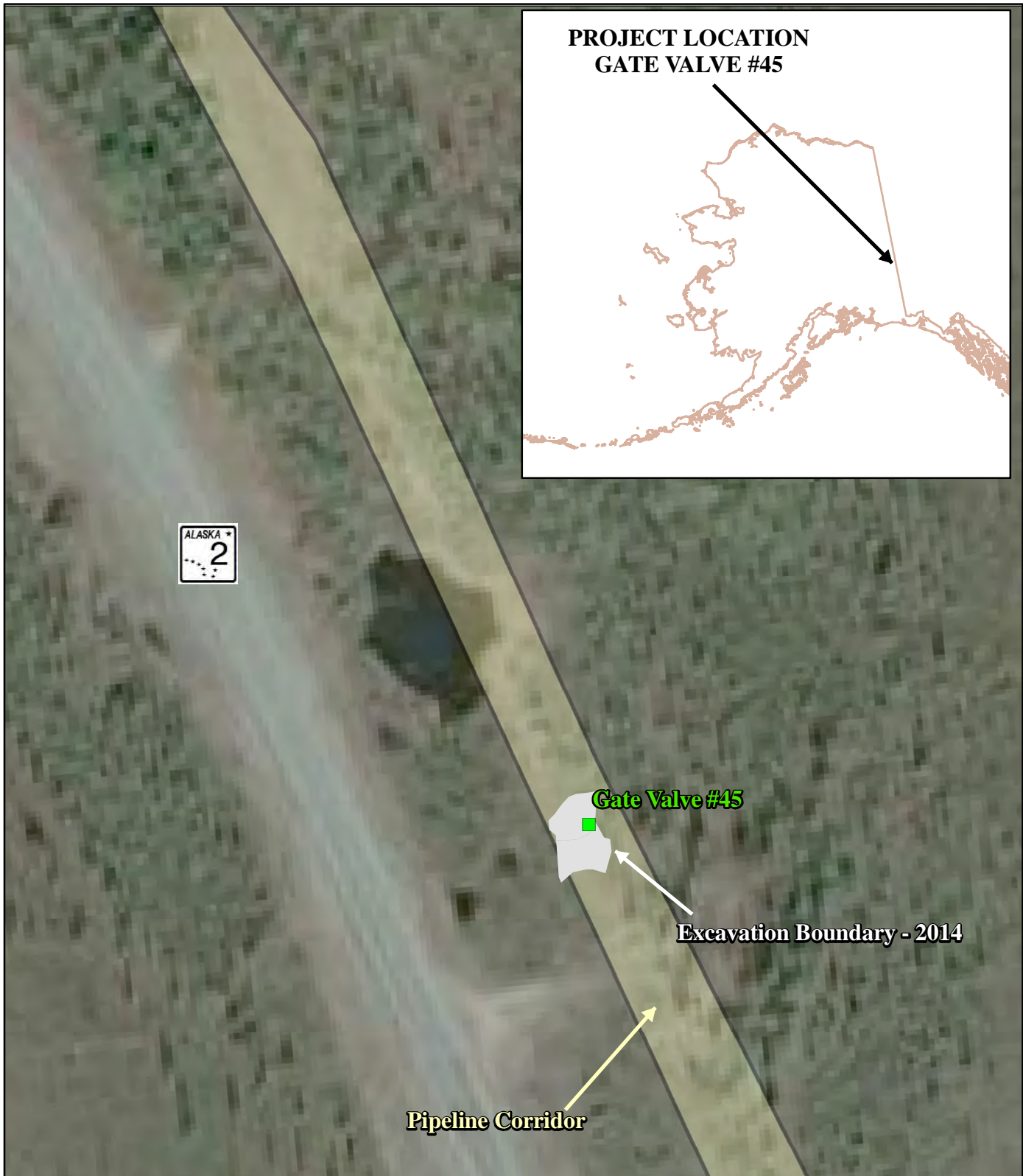
CH2M HILL, 2008. 2007 Haines-Fairbanks Pipeline Site Investigation. July. (F10AK101601\_01.09\_0505\_a)

USACE, 2010. 2008 ROST Site Investigation Report Final, March. (F10AK101601\_01.09\_0503\_a)

FES, 2012. Final Remedial Investigation Report Gate Valve #45, Gate Valve #49, Gate Valve #52, Gate Valve #59 Sites, October. (F10AK101601\_03.10\_0501\_a)

North Wind, 2015. Removal Action Report for Contaminated Soil Removal, Pipeline Mileposts 347 (Gate Valve #45), 383 (Gate Valve #48), and 399.5 (Gate Valve #49), April. (F10AK101604\_07.08\_0500\_p)

## Figures



**PROJECT LOCATION  
GATE VALVE #45**

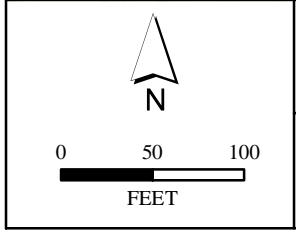


**Gate Valve #45**

**Excavation Boundary - 2014**

**Pipeline Corridor**

**NOTES:**  
 1. Background imagery is from Google Earth Pro. Image date is 8/29/2006.  
 2. The Gate Valve #45 location is based on GPS data collected by North Wind in 2014 and represents the location of the former valve and vault, as both are no longer present.  
 3. The Excavation Boundary - 2014 polygon is based on GPS data collected by North Wind in 2014. All final floor and sidewall confirmation soil samples from the excavation were below applicable ADEC soil cleanup levels (inhalation/ingestion).



**LOCATION AND EXCAVATION BOUNDARY MAPS**



**GATE VALVE #45 - F10AK1016-04**  
 NEAR ALASKA/CANADA BORDER, ALASKA

**FIGURE 1**



## **Attachments**

**DECLARATION OF PROJECT CLOSURE DECISION**  
**And**  
**NO DEPARTMENT OF DEFENSE ACTION INDICATED**  
**For**  
**FORMERLY USED DEFENSE SITE CON/HTRW PROJECT**  
**PIPELINE MILEPOST 347 (GATE VALVE #45 SITE - F10AK1016-04)**  
**NEAR NORTHWAY, ALASKA**

**STATEMENT OF BASIS**

Authority for the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) for Containerized Hazardous Toxic Radiological Waste (CON/HTRW) projects is derived from the Defense Environmental Restoration Program, 10 United States Code (USC) 2701-2707. The decision to close out the CON/HTRW project (F10AK1016-04) is based on the 2015 No Department of Defense Action Indicated (NDAI) Report and the results of site investigations and removal activities completed on behalf of the United States Army Corps of Engineers – Alaska District (USACE-AK) in 2007, 2008, 2011, and 2014.

**SITE DESCRIPTION AND HISTORY**

The Haines-Fairbanks Pipeline (HFP) extends a total of 626 miles from Haines, Alaska, through the Canadian provinces of British Columbia and the Yukon Territory, through Tok, Alaska, and up to Fairbanks, Alaska. The pipeline route generally parallels the Haines Highway from Haines, Alaska, to Haines Junction, Yukon Territory. It then follows the Alaska and Richardson Highways to Delta Junction, Alaska, continuing along the Richardson Highway to Fort Wainwright, Alaska. Approximately 52 percent of the pipeline route lies within United States territory.

An original HTRW project (F10AK1016-01) was authorized for the HFP in 2002 after completing a Findings and Determination of Eligibility (FDE). The results of the FDE indicated that the Haines-Fairbanks Pipeline was formerly used by the Department of Defense (DOD) and eligible for cleanup under the DERP-FUDS. In 2012, a revised Inventory Project Report (INPR) was completed to modify the existing -01 HTRW project and add 13 CON/HTRW projects (F10AK1016-02 through -14). As part of the 2012 HFP INPR revision, the F10AK1016-04 CON/HTRW project was established for Haines-Fairbanks Pipeline Milepost 347, also known as the Gate Valve #45 Site, and Haines-Fairbanks Pipeline Milepost 399.5, also known as the Gate Valve #49 Site. In 2015, a follow-on INPR revision was completed in part to separate the Gate Valve #49 Site into a newly-created CON/HTRW project (F10AK1016-16). The Gate Valve #45 Site was left under the F10AK1016-04 project.

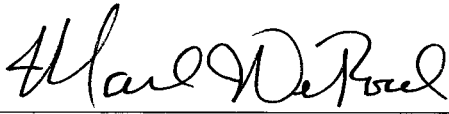
**DESCRIPTION OF THE SELECTED REMEDY AND IMPLEMENTATION**

Based on the results of environmental investigation efforts in 2007, 2008, and 2011, as well as the completion of a contaminated soil removal and confirmation soil sampling effort in 2014, USACE-AK has determined that no further action is required at the Gate Valve #45 Site.

**DECLARATION**

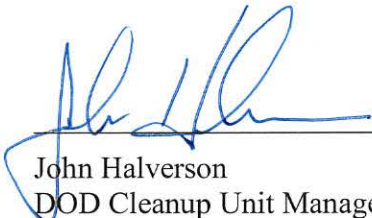
In accordance with the Defense Environmental Restoration Program for Formerly Used Defense Sites, the U.S. Army Engineer District, Alaska, has completed all CON/HTRW activities at the Haines-Fairbanks Pipeline Milepost 347 – Gate Valve #45 FUDS (F10AK1016-04), located near the Alaska/Canada border. This Declaration of Project Closure Decision supports the conclusion that all known sources of CON/HTRW have been remediated. No further CON/HTRW actions are required by the DOD at this project location. This decision may be reviewed and modified in the future if any new information becomes available which indicates the presence of eligible CON/HTRW that may cause a risk to human health or the environment.

This Declaration of Project Closure Decision has been prepared and approved by the undersigned in accordance with the FUDS Program Policy, Engineer Regulation (ER) 200-3-1, May 10, 2004.

*for*  LTC, EN Date 28 MAY 2015

CHRISTOPHER D. LESTOCHI  
COL, EN  
Commanding

The State of Alaska, through the Department of Environmental Conservation agrees this Haines-Fairbanks Pipeline Milepost 347 Gate Valve #45 Site CON/HTRW F10AK1016-04 project closure is consistent with state cleanup requirements. The decision may be reviewed and modified in the future if information becomes available that indicates the presence of contaminants or waste that may cause unacceptable risk to human health or the environment.



Date 5/20/15

John Halverson  
DOD Cleanup Unit Manager  
Alaska Department of Environmental Conservation

|                                 |                          |                            |
|---------------------------------|--------------------------|----------------------------|
| <b>POA STAFF ACTION SUMMARY</b> | 1. CONTROL#<br>PM-15-092 | 2. Suspense 2015-06-04     |
|                                 |                          | 3. Today's Date 2015-05-21 |

4. Subject Project Closure Document Approval for Haines-Fairbanks Pipeline Project # F10AK1016-04

|                                  |                                  |                            |   |
|----------------------------------|----------------------------------|----------------------------|---|
| 5. Office Symbol<br>CEPOA-PM-ESP | 6. Action Officer<br>Beth Astley | 7. Telephone #<br>753-5782 | 8. E-mail<br>beth.n.astley@usace.army.mil |
|----------------------------------|----------------------------------|----------------------------|---|

**COORDINATION**

| 9. Division | 10. Name | 11. Concur/Nonconcur | 12. Comments | 13. Date         |
|-------------|----------|----------------------|--------------|------------------|
| 6 DC        | Lestochi | <i>LAD</i>           |              | <i>27 MAY 15</i> |
| 5 DDC       | DeRocchi | -                    |              |                  |
| 4 DPM       | Bowker   | <i>EUB</i>           |              | <i>5/27/15</i>   |
| EA          |          | -                    |              |                  |
| EN          |          | -                    |              |                  |
| CO          |          | -                    |              |                  |

14. Routing  DC  DDC  DPM  EN  CO

15. For: Information  Read-Ahead  Decision  Approval  Signature

16. PURPOSE/BOTTOM LINE/DISCUSSION:

- PURPOSE: Routing FUDS Project Closure Document for signature.
- BOTTOM LINE: FUDS requires approval from District Commander to close FUDS projects.
- DISCUSSION: The Haines-Fairbanks Pipeline HTRW Project # F10AK1016-04 is ready to close out. ADEC has previously sent approval letters indicating their agreement that no further investigation is necessary at project locations included in this project closure document.
- RESOURCE IMPACT: Project closure is scheduled for FY15 and documents FUDS Program progress.

17. Releaser: Larry M. Phyfe, Branch Chief, PM-ESP *for KAP. [Signature]* *26 May 15*

18. Recommendation: Signature and approval

19. Action: Approved  See Me  Other

COORDINATION (cont.)

| 20. Division  | 21. Name                 | 22. Concur/Nonconcur       | 23. Comments | 24. Date  |
|---------------|--------------------------|----------------------------|--------------|-----------|
| 3 OC          | Kyle Davis<br><i>ckm</i> | <i>BRD</i><br><i>CPD</i> - |              | 27 MAY 15 |
| - RM          |                          | -                          |              |           |
| - CT          |                          | -                          |              |           |
| - RE          |                          | -                          |              |           |
| - RD          |                          | -                          |              |           |
| - LM          |                          | -                          |              |           |
| - IR          |                          | -                          |              |           |
| - SO          |                          | -                          |              |           |
| - SEC         |                          | -                          |              |           |
| 2 PAO         | Findtner                 | <i>FTF</i> -               |              | 26 May 15 |
| - SB          |                          | -                          |              |           |
| - EEO         |                          | -                          |              |           |
| - CPAC        |                          | -                          |              |           |
| - IM          |                          | -                          |              |           |
| (1) FUDS      | Andraschko               | <i>AD</i> -                |              | 26 MAY 15 |
| Misc. Offices |                          | -                          |              |           |
| Misc. Offices |                          | -                          |              |           |
| Misc. Offices |                          | -                          |              |           |
| Misc. Offices |                          | -                          |              |           |
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| Misc. Offices |                          | -                          |              |           |
| Misc. Offices |                          | -                          |              |           |