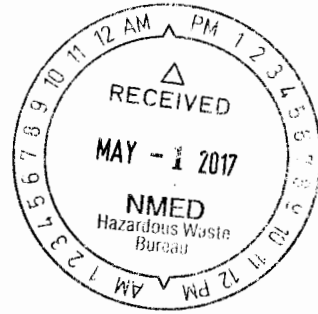




ENTERED



Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221
APR 28 2017

Mr. John E. Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87508-6303

Mr. J. C. Borrego, Deputy Secretary
New Mexico Environment Department
Harold Runnels Building
1190 Saint Francis Drive, P.O. Box 5469
Santa Fe, NM 87502-5469

Subject: Quarterly Report for the Reporting Period between January 1, 2017, through March 31, 2017, as required by NMED Administrative Orders dated February 27, 2014, and May 12, 2014, as amended by NMED Directives dated August 29, 2014, December 9, 2014, July 15, 2015, and February 26, 2016, Waste Isolation Pilot Plant Hazardous Waste Facility Number: NM4890139088-TSDF

Dear Mr. Kieling and Borrego:

The purpose of this letter is to transmit the quarterly report for the reporting period between January 1, 2017, through March 31, 2017, as required by the February 27, 2014, and May 12, 2014, Administrative Orders issued under the authority of the New Mexico Hazardous Waste Act § 74-4-13 from Mr. Ryan Flynn to Messrs. Hellstrom, Franco, Cook, and McQuinn, and as amended by the August 29, 2014, and December 9, 2014, directives from Mr. Ryan Flynn to Messrs. Franco and McQuinn, the July 15, 2015, directive from Ms. Kathryn Roberts to Messrs. Bryson and Breidenbach and the February 26, 2016, directive from Ms. Kathryn Roberts to Messrs. Shrader and Breidenbach. The paper copy of the report is enclosed along with a compact disc containing the electronic version of the report.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate, and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. George T. Basabilvazo at (575) 234-7488.

Sincerely,

Todd Shrader, Manager
Carlsbad Field Office

Philip J. Breidenbach, Project Manager
Nuclear Waste Partnership LLC

Enclosure

cc: w/enclosure
R. Maestas, NMED *ED
D. Biswell, NMED ED
J. Sales, EPA, Region 6 ED
CBFO M&RC
*ED denotes electronic distribution



Quarterly Status Report for the New Mexico Environment Department Administrative Orders

Reporting Period January 1, 2017, through March 31, 2017

Introduction

This report serves to fulfill the monitoring and reporting requirements set forth by Administrative Orders, AO2 and AO3, as amended by the NMED directives dated August 29, 2014, December 9, 2014, July 15, 2015, February 26, 2016, and December 16, 2016. Per the NMED letter on December 16, 2016, AO1 has been closed. In accordance with Paragraph 18(a) of AO2, subsequent reports will identify new information since the previous reporting period. The following sections combine the information required by the orders and provide references to the respective paragraphs from AO2 and AO3.

1.0 Status of Permit-related underground inspections for this reporting period, as requested per Paragraphs 18(c) and 18(e)(iii) of AO2, including the accessibility for personnel performing these Permit-required activities per Paragraph 18(e)(i) of AO2 and the status of recovery activities per Paragraph 18(e)(ii) of AO2:

Attachment 1, *List of Underground Inspections*, shows the current status of each underground inspection required by the Permit.

2.0 Status of Permit-related monitoring activities for this reporting period, as requested per Paragraph 18(c) of AO2, including the accessibility for personnel performing these Permit-required activities per Paragraph 18(e)(i) of AO2 and the status of recovery activities per Paragraph 18(e)(ii) of AO2:

Volatile Organic Compound (VOC) Monitoring

In accordance with AO2, ongoing disposal room VOC monitoring in filled panels (required by Permit, Part 4, Section 4.4.3.) is not currently being performed due to underground access prohibition in Panels 3 and 4. Ongoing disposal room monitoring is addressed in the revised Class 3 PMR, *Modifications to the WIPP Panel Closure Plan*, which was submitted to the NMED on November 10, 2016.

The Permittees are performing repository VOC monitoring. Samples are being collected twice each week at one location on-site and one location off-site in accordance with Permit Part 4, Section 4.6.2., and associated requirements in Attachment N. The two monitoring locations, which are 24-hour VOC samples, are collected on the surface near the Training Building (VOC-C) and at an off-site location (VOC-D) approximately a mile southeast of the Training Building. Calculated running averages based on validated VOC monitoring data obtained since early February 2016 to date indicate that total carcinogenic risk and the noncarcinogenic hazard index associated with VOC releases are below the acceptable levels defined in the Permit. These samples were taken pursuant to the revised Permit per the Class 2 PMR, *Revise Volatile Organic Compound Monitoring Procedures*, which was approved by the NMED on January 8, 2016.

In accordance with the *WIPP Nitrate Salt Bearing Waste Container Isolation Plan*, Revision 2, dated May 29, 2015, the Panel 6 and Panel 7, Room 7, VOC monitoring lines have been capped. Monitoring of Panel 7, Room 7, has been terminated. Room-based VOC monitoring activities commenced in Panel 7 beginning with Room 6 prior to the resumption of waste-emplacment operations, which occurred on January 4, 2017.

Geomechanical Monitoring

The purpose of geomechanical monitoring is to confirm the structural integrity of the underground repository. Remote geomechanical monitoring data continue to be transmitted electronically on a weekly basis via remote instruments located in Room 6 of Panel 7 in accordance with Permit Part 4, Section 4.6.1., associated requirements in Attachment A2-5b(2), and Attachment E, Table E-2. As stated in Revision 2 of the *Underground Compliance Plan*, submitted to the NMED December 6, 2016, some manually read locations are in inaccessible areas of the underground due to deteriorating ground conditions.

Hydrogen and Methane Monitoring

Hydrogen and methane monitoring activities (required by Permit Part 4, Section 4.6.5 and associated requirements in Attachment N1) are not currently being performed due to underground access prohibition in Panels 3 and 4. In accordance with the *WIPP Nitrate Salt Bearing Waste Container Isolation Plan*, Revision 2, dated May 29, 2015, the Panel 6 VOC and hydrogen/methane monitoring lines have been capped. Previous monitoring data (prior to the 2014 events) from the Semi-Annual VOC, Hydrogen and Methane Data Summary Reports indicate that the inability to monitor does not pose a threat to underground waste workers. Hydrogen and methane monitoring is addressed in the revised Class 3 PMR, *Modifications to the WIPP Panel Closure Plan*, which was submitted to the NMED on November 10, 2016.

Mine Ventilation Rate Monitoring

Mine ventilation rate monitoring activities (required by Permit Part 4, Section 4.6.4. and associated requirements of Permit Attachment O) are currently being performed.

3.0 Updates on activities performed pursuant to the Underground Derived Waste Storage Plan, including a description of any surface and underground derived waste produced, whether the derived waste is mixed or non-mixed, the contents, container type, container location, total container count, and approximate volume of derived waste per container, as requested per Paragraph 18(d) of AO2:

Since the submittal of the last quarterly report, no derived waste requiring storage at the WIPP facility has been generated. However, since the resumption of waste emplacement activities at the WIPP facility, the Permittees have emplaced some of the waste that had been in storage in the Waste Handling Building since 2014. Attachment 2, *Surface and Underground Derived Waste Currently in Storage at the WIPP Facility*, has been updated to reflect the waste remaining in storage in the Waste Handling Building as of the end of the reporting period.

- 4.0 The current status of activities required by the RCRA Contingency Plan, Permit Attachment D, including identification of applicable sections of the Contingency Plan, the schedule for actions required under the Contingency Plan, and any deviations from any Contingency Plan requirements, as requested per Paragraph 18(b) of AO2. Non-applicable sections shall also be identified and explanations shall be provided as to why such sections do not apply:**

There were no changes to this section during the reporting period. Attachment 3, *Status of RCRA Contingency Plan Required Activities*, is currently reserved.

- 5.0 The report shall include the submission of a list containing all additional requirements placed upon the WIPP by any state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of the May 12, 2014, Administrative Order, including requirements by other segments of DOE, as requested by Paragraph 18(f) of AO2:**

During this reporting period, there were no additional requirements placed upon the Waste Isolation Pilot Plant (WIPP) by any state or federal agency relating to corrective actions or recovery and as a result of the incidents referenced in Paragraphs 8 and 9 of the May 12, 2014, Administrative Order, including requirements by other segments of the U.S. Department of Energy (DOE), as requested by Paragraph 18(f) of AO2. Attachment 4, *Corrective Actions*, is currently reserved.

- 6.0 The Permittees shall provide a status of recovery-related activities relative to the underground per Paragraph 18(e)(ii) of AO2 and a summary of recovery-related work performed in Panel 7, including relevant photographs, as requested per Paragraph 18(k) of AO2:**

There were no changes to this section during the reporting period. Attachment 5, *Recovery-Related Work Activities*, is currently reserved.

- 7.0 The Permittees shall submit a WIPP Nitrate Salt Bearing Waste Container Isolation Plan per Paragraph 22(a) of AO3. The plan shall contain a detailed proposal for the expedited closure of Panel 6 per Paragraph 22(a)(i) of AO3 and the expedited closure of Panel 7, Room 7 per Paragraph 22(a)(iii) of AO3:**

There were no changes to this section during the reporting period. Attachment 6, *WIPP Nitrate Salt Bearing Waste Container Isolation Plan Information Required by Administrative Order 3*, is currently reserved.

**Attachment 1
List of Underground Inspections**

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 03/31/2017 (Current/Not Current/Other¹)	Date of Last Inspection	Proposed Start Date (If Not Current or Other)²	Comments
Medical Cart (Underground)	Fire Department	Weekly	WP 12-FP0030 Inspecting for Mechanical Operability, Deterioration, and Required Equipment	Current	03/29/2017	N/A	
Contact-Handled (CH) TRU Underground Transporter	Waste Handling	Preoperational	WP 05-WH1603 Inspecting for Leaks/Spills, Mechanical Operability, Deterioration, and area around transporter clear of obstacles	Current	02/28/2017 (52-H-008A)	N/A	For this reporting period, the last waste emplacement occurred on February 28, 2017.
Eye Wash and Shower Equipment (Underground locations)	Equipment Custodian	Weekly	WP 12-IS1832 Inspecting for Deterioration	Current	03/29/2017	N/A	
Eye Wash and Shower Equipment (Underground locations)	Equipment Custodian	Semi-annually	WP 12-IS1832 Inspecting for Deterioration and Fluid Levels-Replace as Required	Current	03/30/2017	N/A	
Fire Detection and Alarm System	Fire Protection Engineering	Semi-annually	WP 12-FP0027 Inspecting for Deterioration and Operability of underground fuel station fire suppression system in accordance with NFPA 17	Current	12/22/2016	N/A	
Fire Extinguishers (Underground locations)	Fire Department	Monthly	WP 12-FP0036 Inspecting for Deterioration, Leaks/Spills, Expiration, seals, fullness, and pressure	Current	03/14/2017	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 03/31/2017 (Current/Not Current/ Other¹)	Date of Last Inspection	Proposed Start Date (If Not Current or Other)²	Comments
Fire and Emergency Response Vehicles (Fire Suppression Cart and Rescue Carts)	Fire Department	Weekly	WP 12-FP0033 Inspecting for Mechanical Operability, Deterioration, Leaks/Spills, and Required Equipment	Current	03/29/2017 (Fire Suppression Cart) 03/29/2017 (Underground Rescue Cart)	N/A	
Forklifts Used for Waste Handling (Electric and Diesel forklifts, Push-Pull Attachment) in Underground	Waste Handling	Preoperational	WP 05-WH1201, WP 05-WH1207, WP 05-WH1401, WP 05-WH1402, WP 05-WH1403, and WP 05-WH1412 Inspecting for Leaks/Spills, Mechanical Operability, Deterioration, and On board fire suppression system	Current	02/24/2017 (52-H-126) 02/28/2017 (52-H-127C) 02/28/2017 (52-H-127D)	N/A	For this reporting period, the last waste emplacement occurred on February 28, 2017.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 03/31/2017 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (If Not Current or Other) ²	Comments
Automatic on-board fire suppression systems	Fire Protection Engineering	Semi-annually	WP 12-FP0060 Inspecting for Mechanical Operability and Deterioration	Current	02/23/2017 (52-H-035A) 02/15/2017 (52-H-26)	See comments	Five pieces of equipment have had the installation of the automatic fire suppression system verified and the initial inspection of the system performed in the last half of 2016. Two of the five have completed the first semi-annual inspection post final acceptance. Additional automatic fire suppression systems continue to be tagged out of service until the approved vendor can confirm the existing configuration or install new systems/parts and perform the initial inspection, thus ensuring the systems can perform their intended function. Qualified fire watches continue to function as compensatory measures for the out of service systems.
Miners First Aid Station	Fire Department	Quarterly	WP 12-FP0035 Inspecting for Required Equipment	Current	01/13/2017	N/A	
Mine Pager Phones (between surface and underground)	Facility Operations	Monthly	WP 04-PC3017 Testing of Mine Pager Phones at essential locations	Current	03/09/2017	N/A	
MSHA Air Quality Monitor	Maintenance/Underground Operations	Daily	WP 12-IH1828 Inspecting for Air Quality Monitoring Equipment Functional Check.	Current	03/31/2017	N/A	

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 03/31/2017 (Current/Not Current/ Other¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other)²	Comments
Fire Department SCBA (Underground locations)	Fire Department	Weekly	WP 12-FP0029 Inspecting for Deterioration and Pressure	Current	03/29/2017 (Underground Rescue Cart)	N/A	
Fire Department SCBA (Underground Locations)	Fire Department	Monthly	WP 12-FP0029 Inspecting for Deterioration and Pressure	Current	03/15/2017 (Underground Rescue Cart)	N/A	
Underground Evacuation Alarm System	Facility Operations	Monthly	WP 04-PC3017 Testing of PA and Underground Alarms	Current	03/09/2017	N/A	
Self-Rescuers and Self-Contained Self-Rescuers	Underground Operations	Quarterly	WP 04-AU1026 Inspecting for Deterioration and Functionality in accordance with MSHA requirements	Current	01/02/2017 (Self- Rescuers) 03/23/2017 (Self-Contained Self-Rescuers)	N/A	Self-Contained Self-Rescuer caches in W-30/S-2750 and E-300/S-1600 were not inspected due to ground control issues in these areas. These caches will be inspected as soon as the areas become accessible.
Underground Openings—Roof Bolts and Travelways	Underground Operations	Weekly	WP 04-AU1007 Inspecting for Deterioration of Accessible Areas	Current	03/21/2017	N/A	
Underground—Geomechanical Instrumentation System (GIS)	Geotechnical Engineering	Monthly	WP 07-EU1301 Inspecting for Deterioration	Current	03/28/2017	N/A	
Underground TRU Mixed Waste Disposal Area	Waste Handling	Preoperational	WP 05-WH1810 Inspecting for Deterioration, Leaks/Spills, mine pager phones, equipment, unobstructed access, signs, debris, and ventilation	Current	02/28/2017	N/A	For this reporting period, the last waste emplacement occurred on February 28, 2017.

System/Equipment Name	Responsible Organization	Inspection Frequency	Procedure Number and Inspection Criteria	Inspection Status as of 03/31/2017 (Current/Not Current/Other ¹)	Date of Last Inspection	Proposed Start Date (if Not Current or Other) ²	Comments
Push-Pull Attachment (Underground)	Waste Handling	Preoperational	WP 05-WH1401 Inspecting for Damage and Deterioration	Current	02/28/2017 (52-H-128E) 02/28/2017 (52-H-128F)	N/A	For this reporting period, the last waste emplacement occurred on February 28, 2017.
Explosion-Isolation Walls	Underground Operations	Quarterly	PM000032 Integrity and Deterioration of Accessible Areas	Current	01/03/2017	N/A	
Bulkhead in Filled Panels	Underground Operations	Monthly	PM000011 Integrity and Deterioration of Accessible Areas	Current	03/08/2017	N/A	

1 **Current** – As of the end of the reporting period, the inspection of in-service equipment was up-to-date (any missed inspections that occurred during the reporting period are noted in the “Comments” field)

Not Current – As of the end of the reporting period, either 1) inspection of in-service equipment was delinquent or 2) emergency equipment was out-of-service, with no established compensatory measure(s)

Other – As of the end of the reporting period either 1) equipment was out-of-service (applicable compensatory measures are noted in the “Comments” field) or 2) equipment was not being used to handle TRU mixed waste

2 Routine inspections are proposed to begin with resumption of normal operations

N/A Not Applicable

Attachment 2
Surface & Underground Derived Waste Currently in Storage at the WIPP Facility

Site of Origin	Shipment	Receipt Date/Time	ICV Closure Date/Time	Venting Deadline	Venting Date	WHB Deadline	Assembly	Unemplaced Containers	Waste Volume ¹ (ft ³)
LANL	LA140018	2/1/2014 1:30	1/29/2014 14:25	3/29/2014 14:25	2/1/2014 12:40	06/30/2017	LA139903	1 SWB	66.3
LANL	LA140019	2/1/2014 1:50	1/30/2014 15:20	3/30/2014 15:20	2/1/2014 14:25	06/30/2017	LA139927	1 SWB	66.3
LANL	LA140019	2/1/2014 1:50	1/30/2014 15:20	3/30/2014 15:20	2/1/2014 14:26	06/30/2017	LA139928	1 SWB	66.3
SRS	SR314011	1/28/2014 14:10	1/22/2014 8:30	3/22/2014 8:30	2/3/2014 12:14	06/30/2017	SR139781	1 SLB2	261
INL	IN140036	2/1/2014 22:40	1/25/2014 13:35	3/25/2014 13:35	2/3/2014 13:15	06/30/2017	IN139540	1 SWB	66.3
INL	IN140036	2/1/2014 22:40	1/25/2014 13:35	3/25/2014 13:35	2/3/2014 13:15	06/30/2017	IN139541	1 SWB	66.3
INL	IN140041	2/3/2014 7:13	1/31/2014 13:30	3/31/2014 13:30	2/3/2014 14:37	06/30/2017	IN140062	1 SWB	66.3
INL	IN140040	2/3/2014 0:17	1/31/2014 13:13	3/31/2014 13:13	2/4/2014 12:22	06/30/2017	IN139593	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:00	4/3/2014 10:00	2/4/2014 16:38	06/30/2017	LA139983	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:05	4/3/2014 10:05	2/4/2014 16:44	06/30/2017	LA139972	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:15	4/3/2014 10:15	2/5/2014 8:34	06/30/2017	LA139965	1 SWB	66.3
LANL	LA140020	2/3/2014 22:34	2/3/2014 10:15	4/3/2014 10:15	2/5/2014 8:36	06/30/2017	LA139966	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:35	4/4/2014 9:35	2/5/2014 9:12	06/30/2017	LA139990	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:35	4/4/2014 9:35	2/5/2014 9:13	06/30/2017	LA139991	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:25	4/4/2014 9:25	2/5/2014 9:32	06/30/2017	LA140008	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:30	4/1/2014 11:30	2/11/2014 9:12	06/30/2017	IN140096	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:30	4/1/2014 11:30	2/11/2014 9:13	06/30/2017	IN140097	1 SWB	66.3
LANL	LA140021	2/4/2014 22:40	2/4/2014 9:30	4/4/2014 9:30	2/11/2014 9:13	06/30/2017	LA140002	1 SWB	66.3
SRS	SR314012	1/31/2014 16:10	1/27/2014 10:48	3/27/2014 10:48	3/26/2014 9:33	06/30/2017	SR139785	1 SLB2	261
SRS	SR314013	2/1/2014 15:15	1/28/2014 10:40	3/28/2014 10:40	3/26/2014 18:30	06/30/2017	SR139789	1 SLB2	261
INL	IN140044	2/6/2014 1:09	2/3/2014 13:49	4/3/2014 13:49	3/27/2014 10:31	06/30/2017	IN136332	7-55G Drums	51.8
INL	IN140043	2/5/2014 0:30	2/1/2014 11:35	4/1/2014 11:35	3/27/2014 12:48	06/30/2017	IN140078	1 SWB	66.3
INL	IN140043	2/5/2014 0:30	2/1/2014 11:35	4/1/2014 11:35	3/27/2014 12:50	06/30/2017	IN140079	1 SWB	66.3
SRS	SR314014	2/4/2014 13:15	1/30/2014 10:30	3/30/2014 10:30	3/27/2014 14:04	06/30/2017	SR139793	1 SLB2	261
INL	IN140043	2/5/2014 0:30	2/1/2014 11:40	4/1/2014 11:40	3/27/2014 14:51	06/30/2017	IN140074	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:50	4/1/2014 11:50	3/27/2014 15:34	06/30/2017	IN140090	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:50	4/1/2014 11:50	3/27/2014 15:37	06/30/2017	IN140091	1 SWB	66.3

Site of Origin	Shipment	Receipt Date/Time	ICV Closure Date/Time	Venting Deadline	Venting Date	WHB Deadline	Assembly	Unemplaced Containers	Waste Volume ¹ (ft ³)
INL	IN140042	2/5/2014 0:34	2/1/2014 11:45	4/1/2014 11:45	3/27/2014 18:08	06/30/2017	IN140070	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:55	4/1/2014 11:55	3/27/2014 18:30	06/30/2017	IN140084	1 SWB	66.3
INL	IN140042	2/5/2014 0:34	2/1/2014 11:55	4/1/2014 11:55	3/27/2014 18:36	06/30/2017	IN140085	1 SWB	66.3
INL	IN140045	2/6/2014 1:27	2/3/2014 13:48	4/3/2014 13:48	3/27/2014 19:24	06/30/2017	IN140066	1 SWB	66.3
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Notes:

¹55G Drum=7.4 ft³, SWB=66.3 ft³, SLB2=261 ft³ (Permit Part 3, Section 3.3.1)

INL – Idaho National Laboratory

LANL – Los Alamos National Laboratory

SRS – Savannah River Site

SWB – standard waste box

SLB2 – standard large box 2

WHB – Waste Handling Building

Attachment 3
Status of RCRA Contingency Plan Required Activities (reserved)
[Last updated September 30, 2016]

Attachment 4
Corrective Actions (reserved)
[Last updated October 31, 2015]

Attachment 5
Recovery-Related Work Activities (reserved)
[Last updated September 30, 2016]

Attachment 6
WIPP Nitrate Salt Bearing Waste Container Isolation Plan
Information Required by Administrative Order 3 (reserved)
[Last updated November 30, 2015]