UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6
Dallas, Texas

In the Matter of	§	
	§	
TPC Group LLC,	§	**Docket No. CAA-06-2022-3364**
	§	
	§	
Respondent.	§	

ADMINISTRATIVE ORDER ON CONSENT

Preliminary Statement

1. The U.S. Environmental Protection Agency, Region 6 ("EPA" or "Complainant"), and TPC Group LLC ("Respondent") have agreed to voluntarily enter into this Administrative Order on Consent ("Order") for the purposes of carrying out the goals of Section 112(r) of the Clean Air Act ("CAA"), 42 U.S.C. § 7412(r), and the regulations promulgated thereunder and codified at 40 C.F.R. Part 68.

Jurisdiction

2. This Order is entered into pursuant to the authority of Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B). Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B), provides that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any other requirement or prohibition of Subchapter I of the CAA, which includes, among other things, the requirements of Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations promulgated thereunder, the Administrator may issue an order requiring compliance with such requirement or prohibition.

Parties

3. Complainant is the Director of the Enforcement and Compliance Assurance Division, EPA, Region 6, as duly delegated by the Administrator of the EPA and the Regional Administrator, EPA, Region 6.

4. Respondent is TPC Group LLC, a company organized under the laws of the state of Texas and authorized to conduct business in the state of Texas.

Statutory and Regulatory Background

5. On November 15, 1990, the President signed into law the CAA Amendments of 1990. The Amendments added Section 112(r) to Title I of the CAA, 42 U.S.C. § 7412(r). The objective of Section 112(r) is to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance.

6. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), commonly referred to as the General Duty Clause, owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the Occupational Safety and Health Act ("OSHA"), 29 U.S.C. § 654 et. seq., to identify hazards which may result from accidental releases using appropriate hazard assessment techniques, to design and maintain a safe facility, taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur.

7. Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), mandates the Administrator to promulgate a list of regulated substances which, in the case of an accidental

release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. Section 112(r)(5) of the CAA, 42 U.S.C. § 7412(r)(5), mandates that the Administrator establish a threshold quantity for any substance listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3). The list of regulated substances and respective threshold quantities is codified at 40 C.F.R. § 68.130.

8. Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), requires the Administrator to promulgate regulations that address release prevention, detection, and correction requirements for stationary sources with threshold quantities of regulated substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3). On June 20, 1996, EPA promulgated a final rule known as the Risk Management Program, 40 C.F.R. Part 68 – Chemical Accident Prevention Provisions, which implements Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

9. The regulations at 40 C.F.R. Part 68 require owners and operators to develop and implement a Risk Management Program at each stationary source with over a threshold quantity of regulated substances. The Risk Management Program must include, among other things, a hazard assessment, a prevention program, and an emergency response program. The Risk Management Program is described in a Risk Management Plan ("RMP") that must be submitted to the EPA.

10. Pursuant to Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and 40 C.F.R. § 68.150, an RMP must be submitted for all covered processes by the owner or operator of a stationary source subject to 40 C.F.R. Part 68 no later than the latter of June 21, 1999, or the date on which a regulated substance is first present above the threshold quantity in a process.

11. The regulations at 40 C.F.R. § 68.10 set forth how the Chemical Accident Prevention Provisions of 40 C.F.R. Part 68 apply to each program level of covered processes.

Pursuant to 40 C.F.R. § 68.10(i), a covered process is subject to Program 3 requirements if the process does not meet the requirements of Program 1, as described in 40 C.F.R. § 68.10(g), and if it is in a specified North American Industrial Classification System code or is subject to the OSHA process safety management standard, 29 C.F.R. § 1910.119.

Definitions

12. Section 302(e) of the CAA, 42 U.S.C. § 7602(e), defines "person" to include any individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency department, or instrumentality of the United States and any officer, agent, or employee thereof.

13. Section 112(r)(2)(A) of the CAA, 42 U.S.C. § 7412(r)(2)(A), and the regulation at 40 C.F.R. § 68.3 defines "accidental release" as an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

14. Section 112(r)(2)(C) of the CAA, 42 U.S.C. § 7412(r)(2)(C) and the regulation at 40 C.F.R. § 68.3 defines "stationary source," in part, as any buildings, structures, equipment, installations or substance emitting stationary activities which belong to the same industrial group, which are located on one or more contiguous properties, which are under the control of the same person (or persons under common control) and from which an accidental release may occur.

15. Section 112(r)(2)(B) of the CAA, 42 U.S.C. § 7412(r)(2)(B), and the regulation at 40 C.F.R. § 68.3 define "regulated substance" as any substance listed pursuant to Section 112(r)(3) of the CAA, as amended, in 40 C.F.R. § 68.130.

16. The regulation at 40 C.F.R. § 68.3 defines "threshold quantity" as the quantity specified for regulated substances pursuant to Section 112(r)(5) of the CAA, as amended, listed

in 40 C.F.R. § 68.130 and determined to be present at a stationary source as specified in 40 C.F.R. § 68.115.

17. The regulation at 40 C.F.R. § 68.3 defines "process" as any activity involving a regulated substance including any use, storage, manufacturing, handling or on-site movement of such substances or combination of these activities. For the purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

18. The regulation at 40 C.F.R. § 68.3 defines "covered process" as a process that has a regulated substance present in more than a threshold quantity as determined under 40 C.F.R. § 68.115.

EPA Findings of Fact and Conclusions of Law

19. Respondent is, and at all times referred to herein was, a "person" as defined by Section 302(e) of the CAA, 42 U.S.C. § 7602(e).

20. Respondent is the owner and operator of the facility located at: 8600 Park Place Boulevard, Houston, Texas 70017 ("the Facility").

21. On April 3, 2018, the EPA conducted an inspection at the Facility to evaluate Respondent's compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

22. On October 28, 2020, the EPA requested, and on December 15, 2020, January 8, 2021, and July 13, 2021, Respondent provided documentation and information concerning the Respondent's compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

23. On June 15, 2022, the EPA conducted a site visit at the Facility to evaluate Respondent's compliance with Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and 40 C.F.R. Part 68.

24. The Facility is a "stationary source" pursuant to Section 112(r)(2)(C) of the CAA, 42 U.S.C. 7412(r)(2)(C), and the regulation at 40 C.F.R. § 68.3.

25. Respondent operates a petrochemical manufacturing process at the Facility that produces butadiene, butene-1, raffinate, isobutylene, diisobutylene, and polyisobutylene.

26. Respondent's petrochemical manufacturing process at the Facility meets the definition of a "process" as defined by 40 C.F.R. § 68.3

27. Respondent's activities at the Facility involve the use, storage, manufacturing, handling, and/or on-site movement of 1-butene, isobutane, ammonia (conc 20% or greater), 1,3-butadiene, and flammable mixtures consisting of butane, 1-butene, propane, 2-butene, 1,3-butadiene, pentane, 2-methylpropene, isopentane, and chlorine (hereinafter the "HNO Regulated Substances").

28. The HNO Regulated Substances are each a "listed substance" as referred to in Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

29. From the time Respondent first produced, processed, handled, or stored listed substances at the Facility, Respondent was subject to the requirements of the General Duty Clause in Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

30. The HNO Regulated Substances are each a "regulated substance" pursuant to Section 112(r)(2)(B) of the CAA, and the regulation at 40 C.F.R. § 68.3.

31. Respondent has greater than threshold quantities of the HNO Regulated Substances, as listed in 40 C.F.R. § 68.130 and determined pursuant to 40 C.F.R. § 68.115(b)(3), in a process at the Facility.

32. Multiple processes at the Facility meet the definition of "covered process" as defined by 40 C.F.R. § 68.3.

33. From the time Respondent first had on-site greater than a threshold quantity of any of the HNO Regulated Substances in a process, Respondent was subject to the requirements of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7), and 40 C.F.R. Part 68 because it was the owner or operator of a stationary source that had more than a threshold quantity of a regulated substance in a process.

34. The covered processes at the Facility do not meet the Program 1 eligibility requirements set forth in 40 C.F.R. § 68.10(g), is in the NAICS code 32511 – Petroleum Manufacturing, and are subject to the OSHA process safety management standards; therefore, meeting the Program 3 applicability and eligibility requirements pursuant to 40 C.F.R. § 68.10(i).

35. From the time Respondent first had on-site greater than a threshold quantity of any of the HNO Regulated Substances in a process and met the Program 3 eligibility requirements of 40 C.F.R. §68.10(i), Defendant was required to comply with the Program 3 requirements set forth in 40 C.F.R. § 68.12(d).

EPA Findings of Violation

36. The facts stated in the EPA Findings of Fact and Conclusions of Law above are herein incorporated.

37. Complainant hereby states and alleges that Respondent has violated the CAA and federal regulations promulgated thereunder as follows:

General Duty Clause

38. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the OSHA, 29 U.S.C. § 654 et. seq., to identify hazards and to design and maintain a safe facility, taking such steps as are necessary to prevent releases.

39. The process at the Facility has piping and equipment with visible external corrosion. The visible external corrosion has created equipment deficiencies including pinhole leaks, pitting, and line leaks.

40. Respondent's failure to identify hazards and to design and maintain a safe facility free of external corrosion, and hazardous conditions, taking such steps as are necessary to prevent releases is a violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

General Duty Clause

41. Pursuant to Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1), owners and operators of stationary sources producing, processing, handling or storing substances listed pursuant to Section 112(r)(3) of the CAA, 42 U.S.C. § 7412(r)(3), or any other extremely hazardous substance, have a general duty in the same manner and the same extent as the OSHA, 29 U.S.C. § 654 et. seq., to identify hazards and to design and maintain a safe facility, taking such steps as are necessary to prevent releases.

42. Dead legs, which are piping segments open to the process but with no flow through them, in equipment containing high purity butadiene, can allow for the formation of popcorn polymer if not properly managed. The formation and growth of popcorn polymer can

result in over pressurization, equipment failure, and loss of containment, as evidenced in the catastrophic release that occurred at Respondent's facility located in Port Neches, Texas.

43. The design of the Facility includes at least sixty-three (63) dead legs.

44. At least fifty-three (53) of the dead legs identified by Respondent at the Facility are managed with administrative controls. Administrative controls allow for human error and the potential for a release.

45. TPC was unable to identify the status of at least eighteen (18) dead legs at the time of the June 15, 2022, site visit.

46. The Mobile Ops tracking system used by Respondent for tracking and recording the status of operational and permanent dead legs at the Facility does not reliably and timely record and register the current status of the dead legs.

47. Temporary dead legs at the Facility are not tracked.

48. The catastrophic release at the Port Neches, Texas facility was as a result of a temporary dead leg.

49. Respondent has failed to identify hazards and to design and maintain a facility with controls necessary for managing and mitigating dead legs, including inadequately tracking the status of all dead legs for appropriate management and mitigation, which includes permanent removal, blinding, valving, and regular flushing of the dead legs.

50. Respondent's failure to identify hazards, and to design and maintain a safe facility taking such steps as are necessary to prevent releases is a violation of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1).

Mechanical Integrity - Inspection and Testing

51. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(d)(2), inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

52. Consistent with recognized and generally accepted good engineering practices ("RAGAGEP") for the petrochemical manufacturing industry, owners and operators should calculate the remaining life of the process equipment and record the same.

53. Respondent has failed to calculate the remaining life of process equipment.

54. Respondent's failure to calculate the remaining life of process equipment following RAGAGEP pursuant to 40 C.F.R. § 68.73(d)(2), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Inspection and Testing

55. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(d)(3), the frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

56. Visual external and thickness measurement inspections for piping should be conducted consistent with applicable manufacturers' recommendations and good engineering practices.

57. Respondent failed to perform visual external and thickness measurement inspections consistent with applicable manufacturers' recommendations and good engineering practices.

58. Respondent's failure to perform inspections and tests on piping process equipment at a frequency consistent with applicable manufacturers' recommendations and good engineering practices pursuant to 40 C.F.R. § 68.73(d)(3), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Piping Equipment Deficiencies

59. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

60. Respondent failed to correct equipment deficiencies in piping process equipment, including where there is corrosion found under piping insulation and labeling, where pitting is exhibited, and where pinhole leaks and line leaks are found.

61. Respondent's failure to correct deficiencies in piping process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Pump Equipment Deficiencies

62. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

63. Respondent failed to correct equipment deficiencies in pump process equipment where a running water stream and spray is being used on external pump assemblies.

64. Respondent's failure to correct deficiencies in pump process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Pressure Gauges Equipment Deficiencies

65. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

66. Respondent failed to correct equipment deficiencies in pressure gauge process equipment where the gauges had no readings or incorrect readings.

67. Respondent's failure to correct deficiencies in pressure gauge process equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Mechanical Integrity – Compressor Equipment Deficiencies

68. The regulation at 40 C.F.R. § 68.12(d)(3) requires the owner or operator of a stationary source with a process subject to Program 3 to implement the prevention requirements of 40 C.F.R. §§ 68.65 through 68.87. Pursuant to 40 C.F.R. § 68.73(e) the owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

69. Respondent failed to correct equipment deficiencies in compressors that were outside acceptable limits before further using the compressors, or taking necessary means to assure safe operation, resulting in accidental releases.

70. Respondent's failure to correct deficiencies in compressor equipment that are outside acceptable limits before further use or in a safe and timely manner pursuant to 40 C.F.R. § 68.73(e), as required by 40 C.F.R. § 68.12(d)(3) is a violation of Section 112(r)(7) of the CAA, 42 U.S.C. § 7412(r)(7).

Order for Compliance

71. Based on the EPA Findings of Fact and Conclusions of Law and the EPA Findings of Violation set forth above, and pursuant to the authority of Section 113(a)(3)(B) of the CAA, 42 U.S.C. § 7413(a)(3)(B), as amended, Respondent is hereby ORDERED and agrees

to comply with the requirements of Section 112(r) of the CAA, 42 U.S.C. § 7412(r), and the regulations promulgated thereunder and codified at 40 C.F.R. Part 68.

72. The EPA and Respondent agree that Respondent shall, as expeditiously as possible, but in no event later than the timeframes specified below, complete the following actions ("Compliance Actions") at the Facility:

a. Fixed Equipment (Vessels and Piping):

i. Remaining Life Calculations: Within sixty (60) days of the effective date of this Order, identify all fixed equipment that requires a remaining life calculation pursuant to RAGAGEP and does not have a recorded remaining life calculation. Within one hundred twenty (120) days of the effective date of this Order, calculate and record remaining life calculations as required for all fixed equipment consistent with RAGAGEP.

ii. Damage Mechanism Reviews: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the damage mechanism reviews/corrosion control studies and inspection plans for fixed equipment to ensure these reviews/studies cover all appropriate damage/corrosion mechanisms at the entire Facility and are up-to-date and accurate. Within sixty (60) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved damage mechanism review work plan and submit, as provided herein, a summary of and

schedule for preparing any new damage mechanism review/control studies or otherwise addressing any observations, findings, and recommendations.

iii. Inspection Plans: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the Facility's inspection plans and policies in existence as of the effective date of this Order for all fixed equipment to evaluate whether the inspection plans and policies are consistent with Respondent's corporate and Facility specific programs and policies as well as established RAGAGEP, including but not limited to API 510, API 570, API 580/581. Within ninety (90) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved inspection plans and policies work plan and submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

iv. Overdue Inspections: Within thirty (30) days of the effective date of this Order, identify all fixed equipment with inspections that were overdue on the effective date of this Order, and for which inspections are due consistent with frequencies established by applicable manufacturers' recommendations and good engineering practices. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by the EPA in writing, conduct all overdue inspections on fixed equipment, including but not limited to the equipment specified in Appendix A, consistent with the requirements of 40 C.F.R. § 68.73(d). Within one hundred twenty (120)

days of the effective date of this Order, based on the results of overdue inspections: (i) evaluate and update inspection plans and policies; (ii) ensure inspection schedules are up-to-date and compliant with the inspection plans, policies, and RAGAGEP; (iii) update and record remaining life calculations as required by RAGAGEP; and (iv) correct any equipment deficiencies identified consistent with 40 C.F.R. § 68.73(e). Within one hundred twenty (120) days of the effective date of this Order, submit, as provided herein, a summary of the corrective actions taken pursuant to this paragraph, including documentation that any inspection observations, findings, and recommendations and equipment deficiencies were addressed.

v. Materials of Construction: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for identifying any unknown, incompatible or inadequate materials of construction (e.g., metallurgy, gaskets) based on the latest audit of damage mechanism reviews/corrosion control studies and inspections. Within sixty (60) days of receipt of EPA's approval, Respondent shall complete the actions described in the work plan and submit, as provided herein, a list of equipment with unknown, incompatible or inadequate materials of construction. Within ninety (90) days of identifying the list of equipment, unless otherwise agreed by EPA in writing, Respondent shall take action to: (a) identify any unknown materials of construction and incorporate the information into damage

mechanism reviews/corrosion studies and inspection plans and policies; and (b) replace any incompatible or inadequate materials of construction with those that are compatible or adequate.

b. Rotating Equipment (Pumps and Compressors):

i. Criticality Risk Ranking: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit to EPA for review and approval, a proposed work plan for the audit of any criticality risk ranking performed for rotating equipment, or conduct a risk ranking if one has not previously been done, to ensure the ranking covers all appropriate rotating equipment and is accurate and current. Within thirty (30) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved criticality risk ranking audit work plan and submit, as provided herein, a summary and schedule for addressing any observations, findings, and recommendations.

ii. ITPM Plans: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the inspection, testing, and preventative maintenance ("ITPM") plans and schedules for rotating equipment to ensure completeness, accuracy, compliance with manufacturer's recommendations or RAGAGEP, and consistency with the most current criticality risk ranking. Within thirty (30) days of receipt of EPA's approval, unless otherwise agreed by EPA in writing, Respondent shall complete the actions described in the approved work plan and

submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

iii. ITPM Schedules: Within sixty (60) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the audit of the ITPM schedules for each piece of rotating equipment to identify overdue ITPMs. Within thirty (30) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved work plan and submit, as provided herein, the list of overdue ITPM task. Within thirty (30) days of submitting the list of overdue ITPMs tasks, unless otherwise agreed by EPA in writing: (a) complete all overdue ITPMs tasks; (b)take action to ensure future schedules are up-to-date and compliant with the ITPM plans; and (c) submit, as provided herein, a summary of the actions taken to address the overdue ITPM tasks and correct any future schedules.

iv. Deficiencies: Within thirty (30) days of the effective date of this Order, Respondent shall develop and submit, to EPA for review and approval, a proposed work plan for the purpose of identifying all rotating equipment with deficiencies, including as identified from releases at HNO occurring within the last five (5) years. Within sixty (60) days of receipt of EPA's approval, Respondent shall complete the actions described in the approved deficient rotating equipment work plan and correct deficiencies before further use or submit, as provided herein, a plan to EPA for correcting

deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.

c. Instrumentation and Safety Systems:

i. Within sixty (60) days of the effective date of this Order, compile a list or lists of safety systems (see 40 C.F.R. § 68.65(d)(1)(viii)), and audit the list(s) to ensure the list is accurate, complete, and current. Submit, as provided herein, a summary of Respondent's process for identifying safety systems, and the compiled the list of safety systems.

ii. Within ninety (90) days of the effective date of this Order, perform an audit of the hazard and risk assessments ("H&RA") conducted for all safety instrumented systems ("SIS") to ensure they are accurate, complete, and compliant with Respondent's corporate and Facility specific programs and policies and established RAGAGEP (e.g. ANSI/ISA 61511). Submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

iii. Within one hundred twenty (120) days of the effective date of this Order, perform an audit of the safety requirements, design, and safety integrity level ("SIL") and/or risk reduction factor ("RRF") designations for all safety instrumented systems ("SIS") to determine whether they are accurate, current, and consistent with the latest H&RAs. Submit, as provided herein, a summary of Respondent's process for auditing the SIS.

iv. Within one hundred twenty (120) days of the effective date of this Order, Respondent shall develop and submit to EPA for review and approval, a

proposed work plan for the audit of the ITPM plans and schedules for all instrumentation and safety systems to determine whether they are accurate, current, and consistent with the latest H&RAs and current safety systems. Within sixty (60) days of EPA's approval, Respondent shall complete the actions described in the approved work plan and submit, as provided herein, a summary of and schedule for addressing any observations, findings, and recommendations.

v. Within sixty (60) days of the effective date of this order, identify all overdue instrumentation and safety system ITPM tasks and submit, as provided herein, the list of overdue ITPM tasks to EPA. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by EPA in writing, conduct all overdue ITPMs tasks and ensure schedules are up-to-date and compliant with the ITPM plans.

vi. Within one hundred twenty (120) days of the effective date of this Order, Respondent shall identify all instrumentation and safety system deficiencies and correct deficiencies before further use or submit, as provided herein, a plan to EPA for correcting deficiencies in a safe and timely manner when necessary means are taken to assure safe operation.

d. Water on Pumps: Within twenty-one (21) days of the effective date of this Order:

i. Evaluate and identify the cause for water streams and spray being utilized on the exterior of pumps at the Facility.

ii. Identify and perform corrective measures to ensure pumps are operated and maintained consistent with manufacturers' recommendations and the Facility's applicable safe operating parameters.

e. Deficient Pressure Gauges:

i. Within sixty (60) days of the effective date of this Order:

a. Survey all operating units to evaluate the operating condition of local gauges used in operator rounds, including but not limited to pressure, temperature, level, and flow gauges.

b. Remove, replace, or repair all gauges determined to be non-functioning or in-error consistent with 40 C.F.R. § 68.73(e).

ii. Within two hundred forty (240) days of the effective date of this Order, unless otherwise agreed by EPA in writing:

a. Survey all operating units to evaluate the operating condition of local gauges, including but not limited to pressure, temperature, level, and flow gauges.

b. Remove, replace, or repair all gauges determined to be non-functioning or in-error consistent with 40 C.F.R. § 68.73(e).

f. Idle or Out-of-Service Equipment: Within one hundred twenty (120) days of the effective date of this Order, unless otherwise agreed by EPA in writing:

i. Identify all units or equipment classified as idle, meaning retired from service and abandoned in place, or out-of-service, including equipment that has been permanently removed from operational service and equipment that has been taken out-of-service for an undetermined length

of time (e.g. equipment currently out of service but may be returned to operational service at some future time).

ii. Evaluate whether the idle or out-of-service units or equipment are physically connected to in-service units or equipment.

iii. Positively isolate any units or equipment determined to be physically connected to in-service units or equipment.

g. Dead Legs Administrative Controls:

i. Within forty-five (45) days of the effective date of this Order, evaluate each administratively managed dead leg in high purity butadiene service to determine whether the dead leg can be permanently removed or is necessary for continued operation and submit, as provided herein, a summary of the evaluation, including an explanation of why the dead leg cannot be permanently removed if so determined, for each administratively managed dead leg.

a. Within 90 days of the effective date of this Order, for dead legs that Respondent determines are not necessary for continued operation, submit to EPA a work plan to permanently mitigate the dead leg, such as through removal or blinding.

ii. Within sixty (60) days of the effective date of this Order, for each dead leg in high purity butadiene service that are managed with administrative controls and are necessary for continued operation, Respondent shall: (1) submit to EPA, as provided herein, a description of the type of administrative controls in place; (2) establish a dedicated team of trained

personnel to perform the administrative control measures; and (3) establish a system that documents ongoing and completed administrative control measures in a timely, adequate, and reliable manner.

iii. Every 30 days from the effective date of this Order and continuing until this Order is terminated, assess, and submit a report, as provided herein, indicating whether the administrative control measures performed on each dead leg have been performed and are effective.

h. Dead Legs Mobile Ops Tracking System: Within thirty (30) days of the effective date of this Order:

i. Take corrective action to ensure the Mobile Ops system provides reliable, timely, and current tracking and recording of Facility dead legs; or

ii. Alternatively, establish a different electronic system or platform to reliably and timely track and record the current status of Facility dead legs.

i. Temporary Dead Legs: Within sixty (60) days of the effective date of this Order:

i. Establish an electronic system or platform to reliably and timely track and record the current status and type of mitigation employed for all temporary dead legs in high purity butadiene service that can be reviewed and assessed by all necessary Facility personnel.

ii. Every seven (7) days from the effective date of this Order and continuing until this Order is terminated, confirm the implementation of mitigation measures for every temporary dead leg.

j. Missing Operational or Permanent Dead Legs: Within five (5) days of the effective date of this Order:

i. Identify the status of each dead leg for which no status is known, including but not limited to dead leg numbers: 35, 44, 53, 54, 63, 65, 78, 86, 87, 88, 104, 107, 108, 110, 117, 122, 124, 125, 135, 139, 140, 143, and 145.

ii. Evaluate whether these dead legs have been permanently removed, or what mitigation controls need to be or are being implemented.

iii. Add any of the missing dead legs not permanently removed to the tracking system.

k. Maintenance:

i. Within ninety (90) days of the effective date of this Order, unless otherwise agreed by EPA in writing, audit the Maximo maintenance work process software for outstanding work orders (approved work orders not yet completed with a past due date) and outstanding work order requests (work order requests awaiting approval or denial), as of the effective date of this Order. Submit, as provided herein, the procedures and training related to submitting work order requests and a list of any outstanding work order requests and work orders.

ii. Within one hundred twenty (120) days of the effective date of this Order, unless otherwise agreed by EPA in writing, resolve all outstanding work orders.

iii. Within three hundred (300) days of the effective date of this Order, unless otherwise agreed by EPA in writing, resolve all outstanding work order requests.

l. Housekeeping Standard: Within thirty (30) days of the effective date of this Order:

i. Develop a housekeeping standard for the Facility, including purpose, scope, objective, and regularly schedule plant tours, occurring at least every two weeks for the initial six (6) months, to identify housekeeping issues and establish corrective actions.

ii. Inform Facility personnel of the developed housekeeping standard.

iii. Designate responsible personnel, to oversee implementation of the housekeeping standard.

iv. Establish a system to track and manage identified housekeeping issues and the status of corrective actions.

Submissions

73. Every 30 days from the effective date of this Order until the termination of this Order, Respondent shall provide a progress report to EPA detailing the actions Respondent has taken in furtherance of its obligations under this Order, including records in electronic format (e.g. Excel) of the tracking system used for managing dead legs at the Facility. Such records shall include the routine reporting of administrative control compliance issued at least monthly by the production manager to site leadership and the HNO Dead Leg Table.xls located on Intranet in the HNO Polymer Study Folder referred to in the BD Dead Leg Management Policy, EHS-MGT-HNO-1110, effective January 31, 2021.

74. Upon completion of each milestone detailed in Paragraph 71 of this Order, Respondent shall provide verification in the monthly progress report that the requirement is

satisfied. The first progress report shall be due no later than 30 days after the effective date of this Order. Each subsequent progress report shall be due every 30 days thereafter.

75. Within 7 days of each progress report submission, Respondent shall meet with the EPA virtually, in person, or otherwise to discuss the progress towards its obligations under this Order and any questions related to that progress.

76. All submissions to EPA required by this Order shall contain the following certification signed by an authorized representative of Respondent:

> I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

77. All submissions to EPA required by this Order, and requests for progress report meetings, shall be sent by electronic mail to:

Justin McDowell
Enforcement and Compliance Assurance Division
Air Enforcement Branch
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mcdowell.justin@epa.gov

and

Clarissa Mills
Office of Regional Counsel
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mills.clarissa@epa.gov

78. All documents submitted by Respondent to EPA in the course of implementing this Order shall be available to the public unless identified and determined to be confidential business information pursuant 40 C.F.R. Part 2, Subpart B.

Stipulated Penalties

79. Respondent shall be liable for stipulated penalties for failure to comply with the requirements of this Order. The following stipulated penalties shall accrue per violation per day for failure to comply with the Compliance Actions or Submissions requirements above:

Penalty per Violation per Day	Period of Noncompliance
$7,500	1st through 15th day
$15,000	15th through 30th day
$37,500	31st day and beyond

80. All penalties shall begin to accrue on the day after the complete performance is due, or on the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity required by this Order.

81. If EPA rejects Respondent's proposed resolution of any Compliance Action or rejects any written submittal required in paragraph 72 above, EPA will notify Respondent promptly in writing. Respondent shall have 15 days in which to address EPA's concern. Any stipulated penalties applicable shall accrue during the 15-Day period, but shall not be payable unless the Respondent's further efforts to address EPA's concerns are rejected as insufficient by the EPA at the conclusion of the 15-Day period. As to any written submittal required in paragraph 72 above, if the original submittal was so deficient as to constitute a material breach of Respondent's obligations under this Order, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

82. The EPA may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due to it under this Order.

83. Respondent retains the right to dispute any demand for stipulated penalties.

84. The payment of penalties shall not alter in any way Respondent's obligation to comply with the provisions of this Order.

85. All penalties accruing under this section shall be due and payable to the United States within thirty (30) days of Respondent's receipt from the EPA of a demand for payment of stipulated penalties. Such payments shall identify Respondent by name and docket number and shall be by certified or cashier's check made payable to the "United States Treasury" and sent to:

U.S. Environmental Protection Agency
Fines and Penalties
Cincinnati Finance Center
PO Box 979077
St. Louis, Missouri 63197-9000

or by alternate payment method described at http://www.epa.gov/financial/makepayment.

86. A copy of the check or other information confirming payment shall simultaneously be sent by electronic mail to:

Justin McDowell
Enforcement and Compliance Assurance Division
Air Enforcement Branch
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500 (ECDAC)
Dallas, Texas 75270-2101
mcdowell.justin@epa.gov

87. Respondent understands that failure to timely pay any portion of the stipulated penalty may result in the commencement of a civil action in Federal District Court to recover the full remaining balance, along with penalties and accumulated interest. In such case, interest shall begin to accrue on the stipulated penalty from the date of delinquency until such stipulated penalty and any accrued interest are paid in full. 31 C.F.R. § 901.9(b)(1). Interest will be assessed at a rate of the United States Treasury Tax and loan rates in accordance with 31 U.S.C. § 3717. Additionally, a charge will be assessed to cover the costs of debt collection including

processing and handling costs, and a non-payment penalty charge of six percent (6%) per year compounded annually will be assessed on any portion of the debt which remains delinquent more than ninety (90) days after payment is due. 31 U.S.C. § 3717(e)(2).

Other Terms and Conditions

88. By entering into this Order, Respondent: (a) consents to and agrees to not contest the EPA's authority or jurisdiction to issue or enforce this Order; and (b) agrees to undertake all actions required by this Order. Respondent reserves the right to challenge the Findings of Fact and Conclusions of Law made herein in any proceedings outside of this Order, not including any enforcement of this Order.

89. Respondent neither admits nor denies the EPA Findings of Fact and Conclusions of Law and the EPA Findings of Violation. By entering into this Order, Respondent makes no factual or legal admissions.

90. Respondent and the EPA agree to bear their respective costs and attorney's fees. Respondent waives its right to seek reimbursement of their costs and attorney's fees under the Equal Access to Justice Act (5 U.S.C. § 504), as amended by the Small Business Regulatory Enforcement Fairness Act (P.L. 104-121), and any regulations promulgated thereunder.

General Provisions

91. Respondent waives any and all remedies, claims for relief and otherwise available rights to jurisdictional or administrative review of this Order that Respondent may have with respect to any issue of fact or law set forth in this Order, including, but not limited to, any right of judicial review under Section 307(b)(1) of the CAA, 42 U.S.C. § 7607(b)(1), or under the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

92. Any violation of this Order may result in an additional enforcement action under Section 113 of the CAA, 42 U.S.C. § 7413. The EPA may use any information submitted under this Order in an administrative, civil judicial, or criminal action. Section 113 of the CAA, 42 U.S.C. § 7413, authorizes the Administrator to:

a. issue an administrative penalty order under Section 113(d)(1) of the CAA, 42 U.S.C. § 7413(d)(1), assessing a civil penalty not to exceed $51,796 (or amount as adjusted by the Civil Monetary Penalty Adjustment Rule) per day of violation, pursuant to Section 113(d)(1)(B) of the CAA, 42 U.S.C. § 7413(d)(1)(B);

b. bring a civil judicial enforcement action for permanent or temporary injunction, or to assess and recover a civil penalty not to exceed $414,364 (or amount as adjusted by the Civil Monetary Penalty Adjustment Rule) per day of violation, or both, pursuant to Section 113(b)(2) of the CAA, 42 U.S.C. § 7413(b)(2); or

c. request the Attorney General to commence a criminal action pursuant to Section 113(c) of the CAA, 42 U.S.C. § 7413(c).

93. This Order does not resolve any civil or criminal claims for violations alleged in this Order. In accordance with Section 113(a)(4) of the CAA, 42 U.S.C. § 7413(a)(4), issuance of this Order does not preclude EPA from assessing penalties, obtaining injunctive relief, or taking any other action authorized under the CAA, or other applicable federal laws or regulation. This Order does not affect the obligation of Respondent to comply with all federal, state, and local statutes, regulations, and permits.

94. Nothing herein shall be construed to limit the power of the EPA to undertake any action against Respondent or any person in response to conditions that may present an imminent and substantial endangerment to public health, welfare, or the environment.

95. Nothing in this Order shall limit EPA's right to obtain access to, and/or inspect the Facility, and/or to request additional information from Respondent pursuant to the authority of Section 114 of the CAA, 42 U.S.C. § 7414.

96. For purposes of the identification requirement in Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), and 26 C.F.R. § 162-21(b)(2), performance of the Order for Compliance is restitution, remediation, or required to come into compliance with the law.

97. By signing this Order, the undersigned representative of Respondent certifies that he or she is authorized to enter into the terms and conditions of this Order, and to execute and legally bind Respondent to this Order.

98. The provisions of this Order shall apply and be binding upon Respondent and its agents, officers, directors, employees, trustees, authorized representatives, successors, and assigns. Respondent shall ensure that any agents, officers, directors, employees, contractors, consultants, firms or other persons or entities acting under or for Respondent with respect to matters included herein comply with the terms of this Order. From the Effective Date until termination of this Order, Respondent must give written notice and a copy of this Order to any successors in interest prior to any transfer of ownership or control of any portion or interest in the Facility. Simultaneously with such notice, Respondent shall provide written notice of such transfer, assignment, or delegation to the EPA. In the event of such transfer, assignment, or delegation, Respondent shall not be released form the obligations or liabilities of this Order unless the EPA has provided written approval of the release of said obligations or liabilities.

99. Pursuant to Section 113(a)(4) of the CAA, 42 U.S.C. § 7413(a)(4), this Order shall be effective when fully executed, shall not exceed the earlier of one year or the date of a

determination by the EPA that Respondent has achieved compliance with all terms of this Order, and shall be nonrenewable.

100. The EPA and Respondent may subsequently amend this Order, in writing, in accordance with the authority of the CAA. In the event of any amendment to this Order, all requirements for performance of this Order not affected by the amendment shall remain as specified by the original Order.

101. Unless otherwise stated, all time periods stated herein shall be calculated in calendar days from such date. If a deadline or reporting obligation falls on a Saturday, Sunday, or Federal holiday, the period continues to run until the end of the next day that is not a Saturday, Sunday, or Federal holiday.

102. The EPA and Respondent agree to the use of electronic signatures for this matter. The EPA and Respondent further agree to electronic service of this Order by electronic mail to the following:

To EPA:

mills.clarissa@epa.gov

To Respondent:

scott.elliott@bakerbotts.com; and
scott.janoe@bakerbotts.com

RESPONDENT:
TPC GROUP, LLC

Date: 8/20/2022

Signature

John Harvey III
Name

Vice President Operations
Title

COMPLAINANT:
U.S. ENVIRONMENTAL PROTECTION AGENCY

Cheryl T. Seager
Digitally signed by CHERYL SEAGER
Date: 2022.08.22 17:57:23 -05'00'

Date: August 22, 2022

Cheryl T. Seager
Director
Enforcement and
Compliance Assurance Division
U.S. EPA, Region 6

CERTIFICATE OF SERVICE

I certify that on the date noted below I sent a true and correct copy of the original Administrative Order on Consent to:

Scott Elliott, counsel for TPC Group, LLC
scott.elliott@bakerbotts.com; and

Scott Janoe, counsel for TPC Group, LLC
scott.janoe@bakerbotts.com

CLARISSA MILLS Digitally signed by CLARISSA MILLS Date: 2022.08.23 08:29:23 -05'00'

Signed
Office of Regional Counsel
U.S. EPA, Region 6

APPENDIX A

Piping Unit ID	Equipment ID	Equipment Type	Inspection Date
H20-FRFRL	0090C XTML DUP	Pipe	8/30/2007
H20-FRFRL	0090D XTML DUP	Pipe	8/30/2007
SYSTEM#10 IGS	01	Pipe	9/8/2011
SYSTEM#11 COMPTU	01	Pipe	11/16/2011
SYSTEM#15 STPR	01	Pipe	9/19/2011
SYSTEM#16 LN	01	Pipe	9/17/2011
SYSTEM#17 5040VH	01	Pipe	9/17/2011
SYSTEM#26 STEAM-	01	Pipe	11/1/2011
SYSTEM#6 H20	01	Pipe	11/3/2011
SYSTEM#9 QUENCH	01	Pipe	9/12/2011
SYSTEM#15 STPR	02	Pipe	9/19/2011
SYSTEM#16 LN	02	Pipe	9/18/2011
SYSTEM#17 5040VH	02	Pipe	9/18/2011
SYSTEM#2 REO	02	Pipe	8/23/2011
SYSTEM#26 STEAM-	02	Pipe	11/2/2011
SYSTEM#28 NG	02	Pipe	10/31/2011
SYSTEM#12 QOR	03	Pipe	9/26/2019
SYSTEM#16 LN	03	Pipe	9/18/2011
SYSTEM#2 REO	03	Pipe	8/24/2011
SYSTEM#26 STEAM-	03	Pipe	11/2/2011
SYSTEM#10 IGS	04	Pipe	11/17/2011
SYSTEM#16 LN	04	Pipe	9/18/2011
SYSTEM#18 505DPS	04	Pipe	9/24/2011
SYSTEM#26 STEAM-	04	Pipe	11/2/2011
SYSTEM#16 LN	05	Pipe	9/19/2011
SYSTEM#22 CWR	05	Pipe	9/28/2011
SYSTEM#28 NG	05	Pipe	10/28/2011
SYSTEM#15 STPR	06	Pipe	9/19/2011
SYSTEM#16 LN	06	Pipe	9/19/2011
SYSTEM#16 LN	07	Pipe	9/19/2011
SYSTEM#6 H20	07	Pipe	8/29/2011
SYSTEM#7 ABS-INT	07	Pipe	8/31/2011
SYSTEM#9 QUENCH	07	Pipe	9/16/2011
SYSTEM#15 STPR	08	Pipe	12/5/2011

SYSTEM#16 LN	08	Pipe	9/19/2011
SYSTEM#21 CWS	08	Pipe	10/21/2011
SYSTEM#25 STEAM	08	Pipe	11/3/2011
SYSTEM#9 QUENCH	08	Pipe	9/16/2011
SYSTEM#23 STEAM	09	Pipe	10/3/2011
SYSTEM#21 CWS	10	Pipe	10/30/2011
SYSTEM#23 STEAM	10	Pipe	11/14/2011
SYSTEM#9 QUENCH	10	Pipe	9/16/2011
SYSTEM#23 STEAM	11	Pipe	11/14/2011
SYSTEM#23 STEAM	12	Pipe	11/22/2011
SYSTEM#7 ABS-INT	12	Pipe	10/27/2011
SYSTEM#15 STPR	13	Pipe	12/5/2011
SYSTEM#23 STEAM	14	Pipe	11/3/2011
SYSTEM#18 505DPS	18	Pipe	11/2/2011
SYSTEM#23 STEAM	18	Pipe	11/3/2011
SYSTEM#5 COMP	22	Pipe	10/30/2011
B1	B1-C0180B	Pipe	3/4/2016
CONDENSATE	COND-C0090C	Pipe	1/9/2017
FLR	FLR-C0520A	Pipe	3/29/2011
FLR	FLR-C0800C	Pipe	4/5/2007
FLR	FLR-C1021A	Pipe	9/14/2009
FLR	FLR-C1022	Pipe	9/14/2009
FLR	FLR-C1030	Pipe	9/11/2009
FLR	FLR-C1032	Pipe	9/30/2016
FRFRL	FRFRL-C0004A	Pipe	7/19/2016
FRFRL	FRFRL-C0021	Pipe	10/24/2016
FRFRL	FRFRL-C0059	Pipe	2/4/2008
FRFRL	FRFRL-C0060	Pipe	5/10/2016
FRFRL	FRFRL-C0128	Pipe	1/31/2011
IBTYLN	IBTYLN-C0580B	Pipe	2/29/2016
IC4	IC4-C0110I	Pipe	6/2/2016
OLIG	OLIG-C0060A	Pipe	9/14/2009
OLIG	OLIG-C0070A	Pipe	9/1/2009
OLIG	OLIG-C0080A	Pipe	9/14/2009
OLIG	OLIG-C0090A	Pipe	9/14/2009
OLIG	OLIG-C0110A	Pipe	9/14/2009
OLIG	OLIG-C0120A	Pipe	9/8/2009
OLIG	OLIG-C0150A	Pipe	3/2/2016
OLIG	OLIG-C0170A	Pipe	9/9/2009
OLIG	OLIG-C0180A	Pipe	9/9/2009

OLIG	OLIG-C0190A	Pipe	9/9/2009
PPWW	PIB-C0010A	Pipe	1/24/2017
PPWW	PIB-C0010A	Pipe	1/16/2017
PPWW	PIB-C0020A	Pipe	3/11/2020
PIB	PIB-C0027D	Pipe	8/9/2019
PIB	PIB-C0041A	Pipe	5/5/2008
RACLN	RACLN-C0056	Pipe	10/3/2006
RAFF PIPING	RAFF-C0027	Pipe	8/15/2002
STEAM 150#	STM150-C0060A	Pipe	12/14/2009
STEAM 150#	STM150-C0080A	Pipe	12/14/2009
STEAM 150#	STM150-C0090A	Pipe	12/14/2009
STEAM 150#	STM150-C0100A	Pipe	12/14/2009
STEAM 150#	STM150-C0100B	Pipe	12/14/2009
STEAM 150#	STM150-C0110A	Pipe	12/14/2009
STEAM 150#	STM150-C0110B	Pipe	12/14/2009
STEAM 150#	STM150-C0110C	Pipe	12/14/2009
STEAM 150#	STM150-C0110D	Pipe	1/28/2010
STEAM 150#	STM150-C0110E	Pipe	12/14/2009
STEAM 150#	STM150-C0110F	Pipe	12/14/2009
STEAM 150#	STM150-C0110G	Pipe	12/14/2009
STEAM 150#	STM150-C0110H	Pipe	12/14/2009
STEAM 150#	STM150-C0110I	Pipe	1/25/2010
STEAM 150#	STM150-C0120A	Pipe	1/28/2010
STEAM 150#	STM150-C0120C	Pipe	1/21/2010
STEAM 150#	STM150-C0120D	Pipe	1/26/2010
STEAM 150#	STM150-C0120E	Pipe	12/14/2009
STEAM 150#	STM150-C0130A	Pipe	1/28/2010
STEAM 150#	STM150-C0140A	Pipe	1/15/2010
STEAM 150#	STM150-C0140B	Pipe	1/15/2010
STEAM 150#	STM150-C0140C	Pipe	1/15/2010
STEAM 150#	STM150-C0140D	Pipe	1/28/2010
STEAM 150#	STM150-C0140E	Pipe	1/28/2010
STEAM 150#	STM150-C0140F	Pipe	1/15/2010
STEAM 150#	STM150-C0150A	Pipe	1/15/2010
STEAM 150#	STM150-C0150B	Pipe	1/26/2010
STEAM 150#	STM150-C0160A	Pipe	1/15/2010
STEAM 150#	STM150-C0160E	Pipe	1/15/2010
STEAM 150#	STM150-C0350A	Pipe	8/24/2009
STEAM 150#	STM150-C0390G	Pipe	4/26/2013
STEAM 150#	STM150-C0510B	Pipe	12/3/2009

STEAM 150#	STM150-C0520A	Pipe	12/9/2009
STEAM 150#	STM150-C0530A	Pipe	12/3/2009
STEAM 150#	STM150-C0540A	Pipe	12/3/2009
STEAM 150#	STM150-C0540B	Pipe	12/3/2009
STEAM 150#	STM150-C0540C	Pipe	12/3/2009
STEAM 150#	STM150-C0550A	Pipe	12/3/2009
STEAM 150#	STM150-C0560A	Pipe	12/3/2009
STEAM 150#	STM150-C0560B	Pipe	12/3/2009
STEAM 150#	STM150-C0600A	Pipe	10/27/2009
STEAM 150#	STM150-C0600B	Pipe	10/27/2009
STEAM 150#	STM150-C0610A	Pipe	10/28/2009
STEAM 150#	STM150-C0620A	Pipe	10/28/2009
STEAM 150#	STM150-C0640B	Pipe	10/29/2009
STEAM 150#	STM150-C0650A	Pipe	10/30/2009
STEAM 150#	STM150-C0660A	Pipe	10/31/2009
STEAM 150#	STM150-C0660B	Pipe	10/31/2009
STEAM 150#	STM150-C0670A	Pipe	11/1/2009
STEAM 150#	STM150-C0670B	Pipe	11/1/2009
STEAM 150#	STM150-C0670C	Pipe	11/2/2009
STEAM 150#	STM150-C0680A	Pipe	11/2/2009
STEAM 150#	STM150-C0680B	Pipe	11/2/2009
STEAM 150#	STM150-C0680C	Pipe	11/2/2009
STEAM 150#	STM150-C0680D	Pipe	11/3/2009
STEAM 150#	STM150-C0690A	Pipe	11/3/2009
STEAM 150#	STM150-C0690B	Pipe	11/3/2009
STEAM 150#	STM150-C0700A	Pipe	11/3/2009
STEAM 150#	STM150-C0700B	Pipe	11/4/2009
STEAM 150#	STM150-C0710A	Pipe	11/5/2009
STEAM 150#	STM150-C0710B	Pipe	11/5/2009
STEAM 150#	STM150-C0710C	Pipe	11/5/2009
STEAM 150#	STM150-C0720A	Pipe	11/9/2009
STEAM 150#	STM150-C0720B	Pipe	11/5/2009
STEAM 150#	STM150-C0730A	Pipe	11/9/2009
STEAM 150#	STM150-C0730B	Pipe	11/9/2009
STEAM 150#	STM150-C0740A	Pipe	11/9/2009
STEAM 150#	STM150-C0750A	Pipe	11/10/2009
STEAM 150#	STM150-C0760A	Pipe	11/10/2009
STEAM 150#	STM150-C0760B	Pipe	11/12/2009
STEAM 150#	STM150-C0770A	Pipe	11/12/2009
STEAM 150#	STM150-C0790A	Pipe	11/13/2009

STEAM 150#	STM150-C0800A	Pipe	11/13/2009
STEAM 150#	STM150-C0800B	Pipe	11/14/2009
STEAM 150#	STM150-C0810A	Pipe	11/14/2009
STEAM 150#	STM150-C0820A	Pipe	11/14/2009
STEAM 150#	STM150-C0820B	Pipe	11/16/2009
STEAM 150#	STM150-C0830A	Pipe	11/16/2009
STEAM 150#	STM150-C0830B	Pipe	11/16/2009
STEAM 150#	STM150-C0840A	Pipe	11/16/2009
STEAM 150#	STM150-C0840B	Pipe	11/16/2009
STEAM 150#	STM150-C0850A	Pipe	11/16/2009
STEAM 150#	STM150-C0860A	Pipe	11/16/2009
STEAM 150#	STM150-C0870A	Pipe	11/18/2009
STEAM 150#	STM150-C0880A	Pipe	11/18/2009
STEAM 150#	STM150-C0880B	Pipe	11/18/2009
STEAM 150#	STM150-C0890A	Pipe	11/18/2009
STEAM 150#	STM150-C0900A	Pipe	11/18/2009
STEAM 150#	STM150-C0900B	Pipe	11/18/2009
STEAM 150#	STM150-C0910A	Pipe	11/19/2009
STEAM 150#	STM150-C0920A	Pipe	11/19/2009
STEAM 150#	STM150-C0930A	Pipe	11/19/2009
STEAM 150#	STM150-C0950A	Pipe	11/19/2009
WW	WW-C0001	Pipe	9/9/2009
WW	WW-C0002	Pipe	9/9/2009
WW	WW-C0003	Pipe	7/13/2009
WW	WW-C0014	Pipe	3/8/2016
WW	WW-C0016	Pipe	3/8/2016

FLR	FLR-C0880H	Pipe	6/30/2017
FLR	FLR-C0930B	Pipe	6/30/2017
FLR	FLR-C0930D	Pipe	6/30/2017
FLR	FLR-C0500C	Pipe	6/29/2017
FLR	FLR-C0500D	Pipe	6/29/2017
FLR	FLR-C0900C	Pipe	6/29/2017
FLR	FLR-C0930H	Pipe	6/29/2017
FLR	FLR-C0930I	Pipe	6/29/2017
FLR	FLR-C0500F	Pipe	6/28/2017
FLR	FLR-C0500K	Pipe	6/28/2017
FLR	FLR-C0870B	Pipe	6/28/2017
FLR	FLR-C0930J	Pipe	6/28/2017
FLR	FLR-C0930K	Pipe	6/28/2017

FLR	FLR-C0930L	Pipe	6/28/2017
FLR	FLR-C0130B	Pipe	6/27/2017
FLR	FLR-C0850A	Pipe	6/27/2017
FLR	FLR-C0880L	Pipe	6/27/2017
FLR	FLR-C0880M	Pipe	6/27/2017
FLR	FLR-C0880N	Pipe	6/27/2017
FLR	FLR-C0500N	Pipe	6/26/2017
FLR	FLR-C0500Q	Pipe	6/26/2017
FLR	FLR-C0800G	Pipe	6/23/2017
FLR	FLR-C0800H	Pipe	6/23/2017
FLR	FLR-C0800I	Pipe	6/23/2017
FLR	FLR-C0800K	Pipe	6/23/2017
FLR	FLR-C0800L	Pipe	6/23/2017
FLR	FLR-C0800D	Pipe	6/22/2017
FLR	FLR-C0280A	Pipe	6/19/2017
FLR	FLR-C0660A	Pipe	6/19/2017
FLR	FLR-C0910G	Pipe	6/16/2017
FLR	FLR-C0910I	Pipe	6/16/2017
FLR	FLR-C0910J	Pipe	6/16/2017
FLR	FLR-C0460A	Pipe	6/15/2017
FLR	FLR-C0640A	Pipe	6/15/2017
FLR	FLR-C0650A	Pipe	6/15/2017
FLR	FLR-C0910A	Pipe	6/15/2017
FLR	FLR-C0910C	Pipe	6/15/2017
FLR	FLR-C0910D	Pipe	6/15/2017
FLR	FLR-C0910F	Pipe	6/15/2017
B2	B2-C0030B	Pipe	6/14/2017
FLR	FLR-C0010B	Pipe	6/14/2017
FLR	FLR-C0430A	Pipe	6/14/2017
FLR	FLR-C0570A	Pipe	6/14/2017
FLR	FLR-C0600A	Pipe	6/14/2017
FLR	FLR-C0630A	Pipe	6/14/2017
BD PIPING	BD-C0345	Pipe	6/13/2017
FLR	FLR-C0010C	Pipe	6/13/2017
FLR	FLR-C0110D	Pipe	6/13/2017
FLR	FLR-C0130A	Pipe	6/13/2017
FLR	FLR-C0360A	Pipe	6/13/2017
FLR	FLR-C0470A	Pipe	6/13/2017
MTBE	MTBE-C0048	Pipe	6/13/2017
B2	B2-C0100D	Pipe	6/12/2017

B2	B2-C0100E	Pipe	6/12/2017
B2	B2-C0100F	Pipe	6/12/2017
B2	B2-C0110A	Pipe	6/12/2017
B2	B2-C0110B	Pipe	6/12/2017
BD PIPING	BD-C0016	Pipe	6/12/2017
BD PIPING	BD-C0018	Pipe	6/12/2017
BD PIPING	BD-C0020	Pipe	6/12/2017
BD PIPING	BD-C0412	Pipe	6/12/2017
FLR	FLR-C0010D	Pipe	6/12/2017
FLR	FLR-C0210A	Pipe	6/12/2017
FLR	FLR-C0500L	Pipe	6/12/2017
B2	B2-C0040B	Pipe	6/9/2017
B2	B2-C0060	Pipe	6/9/2017
B2	B2-C0080	Pipe	6/9/2017
B2	B2-C0090A	Pipe	6/9/2017
B2	B2-C0090B	Pipe	6/9/2017
BD PIPING	BD-C0003	Pipe	6/9/2017
BD PIPING	BD-C0008	Pipe	6/9/2017
BD PIPING	BD-C0013	Pipe	6/9/2017
BD PIPING	BD-C0014	Pipe	6/9/2017
BD PIPING	BD-C0017	Pipe	6/9/2017
B2	B2-C0040A	Pipe	6/8/2017
B2	B2-C0070A	Pipe	6/8/2017
B2	B2-C0070B	Pipe	6/8/2017
B2	B2-C0110C	Pipe	6/8/2017
B2	B2-C0220C	Pipe	6/7/2017
FLR	FLR-C0550A	Pipe	6/6/2017
FLR	FLR-C0820C	Pipe	6/5/2017
FLR	FLR-C0900D	Pipe	6/2/2017
PIB	PIB-C0007	Pipe	6/2/2017
FLR	FLR-C0500G	Pipe	6/1/2017
FLR	FLR-C0680I	Pipe	6/1/2017
FLR	FLR-C0800E	Pipe	6/1/2017
FLR	FLR-C0830A	Pipe	6/1/2017
FLR	FLR-C0830B	Pipe	6/1/2017
FLR	FLR-C0840A	Pipe	6/1/2017
FLR	FLR-C0880F	Pipe	6/1/2017
FRFRL	FRFRL-C0060	Pipe	6/1/2017
HCSLOP	HCSLOP-C0100A	Pipe	6/1/2017
FLR	FLR-C0220A	Pipe	5/31/2017

FLR	FLR-C0500P	Pipe	5/31/2017
FLR	FLR-C0800A	Pipe	5/31/2017
FLR	FLR-C0880E	Pipe	5/31/2017
FLR	FLR-C0610A	Pipe	5/30/2017
FLR	FLR-C0620A	Pipe	5/30/2017
FLR	FLR-C0650B	Pipe	5/30/2017
FLR	FLR-C0860B	Pipe	5/30/2017
FLR	FLR-C0860E	Pipe	5/30/2017
FLR	FLR-C0860G	Pipe	5/30/2017
FLR	FLR-C0870C	Pipe	5/30/2017
FLR	FLR-C0880A	Pipe	5/30/2017
FLR	FLR-C0890D	Pipe	5/30/2017
FLR	FLR-C0890K	Pipe	5/30/2017
FLR	FLR-C0540A	Pipe	5/26/2017
FLR	FLR-C0380A	Pipe	5/24/2017
FLR	FLR-C0380B	Pipe	5/24/2017
FLR	FLR-C0380D	Pipe	5/24/2017
FLR	FLR-C0500E	Pipe	5/23/2017
FLR	FLR-C0500H	Pipe	5/23/2017
FLR	FLR-C0500M	Pipe	5/23/2017
FLR	FLR-C0250A	Pipe	5/22/2017
FLR	FLR-C0250B	Pipe	5/22/2017
FLR	FLR-C0410A	Pipe	5/22/2017
FLR	FLR-C0440A	Pipe	5/22/2017
FLR	FLR-C0260A	Pipe	5/19/2017
FLR	FLR-C0310A	Pipe	5/18/2017
FLR	FLR-C0320A	Pipe	5/18/2017
FLR	FLR-C0320B	Pipe	5/18/2017
FLR	FLR-C0350D	Pipe	5/18/2017
FLR	FLR-C0370A	Pipe	5/18/2017
BD PIPING	BD-C0050	Pipe	5/17/2017
FLR	FLR-C0070A	Pipe	5/17/2017
FLR	FLR-C0160A	Pipe	5/17/2017
FLR	FLR-C0220B	Pipe	5/17/2017
FLR	FLR-C0220C	Pipe	5/17/2017
FLR	FLR-C0220D	Pipe	5/17/2017
FLR	FLR-C0230A	Pipe	5/17/2017
FLR	FLR-C0240A	Pipe	5/17/2017
FLR	FLR-C0240C	Pipe	5/17/2017
FLR	FLR-C0340A	Pipe	5/17/2017

FLR	FLR-C0340C	Pipe	5/17/2017
FLR	FLR-C0040D	Pipe	5/16/2017
FLR	FLR-C0050A	Pipe	5/16/2017
FLR	FLR-C0060A	Pipe	5/16/2017
FLR	FLR-C0090A	Pipe	5/16/2017
FLR	FLR-C0140A	Pipe	5/16/2017
FLR	FLR-C0140B	Pipe	5/16/2017
FLR	FLR-C0170A	Pipe	5/16/2017
FLR	FLR-C0180A	Pipe	5/16/2017
FLR	FLR-C0190A	Pipe	5/16/2017
FLR	FLR-C0200A	Pipe	5/16/2017
FLR	FLR-C0010E	Pipe	5/15/2017
FLR	FLR-C0030A	Pipe	5/15/2017
FLR	FLR-C0040B	Pipe	5/15/2017
FLR	FLR-C0100A	Pipe	5/15/2017
FLR	FLR-C0820D	Pipe	5/15/2017
FLR	FLR-C0860C	Pipe	5/12/2017
FLR	FLR-C0860F	Pipe	5/12/2017
FLR	FLR-C0860D	Pipe	5/11/2017
PIB	PIB-C0040G	Pipe	5/10/2017
HCSLOP	HCSLOP-C0020A	Pipe	5/8/2017
BD PIPING	BD-C0411	Pipe	5/4/2017
FLR	FLR-C0020D	Pipe	5/3/2017
FLR	FLR-C0040A	Pipe	5/3/2017
FLR	FLR-C0040C	Pipe	5/3/2017
FLR	FLR-C0060C	Pipe	5/3/2017
HCSLOP	HCSLOP-C0060A	Pipe	5/3/2017
HCSLOP	HCSLOP-C0060B	Pipe	5/3/2017
HCSLOP	HCSLOP-C0170B	Pipe	5/3/2017
FLR	FLR-C0110A	Pipe	5/2/2017
FLR	FLR-C0110B	Pipe	5/2/2017
FLR	FLR-C0680A	Pipe	5/2/2017
FLR	FLR-C0690A	Pipe	5/2/2017
FLR	FLR-C0890E	Pipe	5/2/2017
FLR	FLR-C0890F	Pipe	5/2/2017
BD PIPING	BD-C0065	Pipe	5/1/2017
BD PIPING	BD-C0239	Pipe	5/1/2017
METH	METH-C0006	Pipe	5/1/2017
RAFF PIPING	RAFF-C0040	Pipe	5/1/2017
PIB	PIB-C0038F	Pipe	4/28/2017

BD PIPING	BD-C0037	Pipe	4/27/2017
BD PIPING	BD-C0042	Pipe	4/27/2017
BD PIPING	BD-C0279	Pipe	4/27/2017
MTBE	MTBE-C0053	Pipe	4/27/2017
BD PIPING	BD-C0110	Pipe	4/26/2017
BD PIPING	BD-C0120	Pipe	4/26/2017
BD PIPING	BD-C0280	Pipe	4/26/2017
BD PIPING	BD-C0289	Pipe	4/26/2017
BD PIPING	BD-C0404	Pipe	4/26/2017
HCSLOP	HCSLOP-C0030A	Pipe	4/26/2017
RAFF PIPING	RAFF-C0039	Pipe	4/26/2017
BD PIPING	BD-C0388	Pipe	4/25/2017
BD PIPING	BD-C0399	Pipe	4/25/2017
BD PIPING	BD-C0405	Pipe	4/25/2017
BD PIPING	BD-C0406	Pipe	4/25/2017
FRFRL	FRFRL-C0013	Pipe	4/25/2017
FRFRL	FRFRL-C0110	Pipe	4/25/2017
HCSLOP	HCSLOP-C0130A	Pipe	4/25/2017
BD PIPING	BD-C0056	Pipe	4/24/2017
BD PIPING	BD-C0369	Pipe	4/24/2017
BD PIPING	BD-C0376	Pipe	4/24/2017
BD PIPING	BD-C0377	Pipe	4/24/2017
BD PIPING	BD-C0402	Pipe	4/24/2017
MTBE	MTBE-C0042	Pipe	4/24/2017
BD PIPING	BD-C0350	Pipe	4/21/2017
BD PIPING	BD-C0363	Pipe	4/21/2017
BD PIPING	BD-C0367	Pipe	4/20/2017
BD PIPING	BD-C0375	Pipe	4/20/2017
BD PIPING	BD-C0380	Pipe	4/20/2017
BD PIPING	BD-C0381	Pipe	4/20/2017
MTBE	MTBE-C0005	Pipe	4/20/2017
MTBE	MTBE-C0007	Pipe	4/20/2017
MTBE	MTBE-C0033	Pipe	4/20/2017
BD PIPING	BD-C0005	Pipe	4/19/2017
BD PIPING	BD-C0408	Pipe	4/19/2017
BD PIPING	BD-C0415	Pipe	4/19/2017
BD PIPING	BD-C0063	Pipe	4/18/2017
BD PIPING	BD-C0214	Pipe	4/18/2017
BD PIPING	BD-C0278	Pipe	4/18/2017
BD PIPING	BD-C0286	Pipe	4/18/2017

BD PIPING	BD-C0329	Pipe	4/18/2017
PIB	PIB-C0038G	Pipe	4/18/2017
BD PIPING	BD-C0248	Pipe	4/17/2017
BD PIPING	BD-C0341	Pipe	4/17/2017
BD PIPING	BD-C0360	Pipe	4/17/2017
BD PIPING	BD-C0374	Pipe	4/17/2017
BD PIPING	BD-C0414	Pipe	4/17/2017
RAFF PIPING	RAFF-C0037A	Pipe	4/17/2017
BD PIPING	BD-C0006	Pipe	4/13/2017
BD PIPING	BD-C0371	Pipe	4/12/2017
BD PIPING	BD-C0372	Pipe	4/12/2017
BD PIPING	BD-C0373	Pipe	4/12/2017
MTBE	MTBE-C0054	Pipe	4/12/2017
RAFF PIPING	RAFF-C0044	Pipe	4/12/2017
BD PIPING	BD-C0114	Pipe	4/11/2017
BD PIPING	BD-C0364	Pipe	4/11/2017
BD PIPING	BD-C0366	Pipe	4/11/2017
BD PIPING	BD-C0067	Pipe	4/10/2017
BD PIPING	BD-C0141	Pipe	4/10/2017
BD PIPING	BD-C0149	Pipe	4/10/2017
BD PIPING	BD-C0242	Pipe	4/7/2017
BD PIPING	BD-C0243	Pipe	4/7/2017
BD PIPING	BD-C0244	Pipe	4/7/2017
BD PIPING	BD-C0241	Pipe	4/6/2017
BD PIPING	BD-C0047	Pipe	4/5/2017
RAFF PIPING	RAFF-C0038	Pipe	4/5/2017
BD PIPING	BD-C0118	Pipe	3/22/2017
BD PIPING	BD-C0139	Pipe	3/22/2017
BD PIPING	BD-C0259	Pipe	3/22/2017
BD PIPING	BD-C0260	Pipe	3/22/2017
BD PIPING	BD-C0378	Pipe	3/22/2017
BD PIPING	BD-C0383	Pipe	3/22/2017
FRFRL	FRFRL-C0021	Pipe	3/22/2017
BD PIPING	BD-C0115	Pipe	3/21/2017
BD PIPING	BD-C0122	Pipe	3/21/2017
BD PIPING	BD-C0250	Pipe	3/21/2017
BD PIPING	BD-C0111	Pipe	3/20/2017
BD PIPING	BD-C0112	Pipe	3/20/2017
BD PIPING	BD-C0130	Pipe	3/20/2017
BD PIPING	BD-C0131	Pipe	3/20/2017

BD PIPING	BD-C0142	Pipe	3/20/2017
FRFRL	FRFRL-C0128	Pipe	3/20/2017
RAFF PIPING	RAFF-C0006	Pipe	3/20/2017
BD PIPING	BD-C0281	Pipe	3/17/2017
BD PIPING	BD-C0098	Pipe	3/16/2017
BD PIPING	BD-C0106	Pipe	3/16/2017
BD PIPING	BD-C0123	Pipe	3/16/2017
BD PIPING	BD-C0150	Pipe	3/16/2017
BD PIPING	BD-C0238	Pipe	3/16/2017
BD PIPING	BD-C0267	Pipe	3/16/2017
BD PIPING	BD-C0269	Pipe	3/16/2017
BD PIPING	BD-C0240	Pipe	3/15/2017
BD PIPING	BD-C0263	Pipe	3/15/2017
BD PIPING	BD-C0264	Pipe	3/15/2017
BD PIPING	BD-C0265	Pipe	3/15/2017
BD PIPING	BD-C0352	Pipe	3/15/2017
HCSLOP	HCSLOP-C0020C	Pipe	3/15/2017
HCSLOP	HCSLOP-C0130B	Pipe	3/15/2017
HCSLOP	HCSLOP-C0130C	Pipe	3/15/2017
HCSLOP	HCSLOP-C0130D	Pipe	3/15/2017
BD PIPING	BD-C0253	Pipe	3/14/2017
BD PIPING	BD-C0262	Pipe	3/14/2017
BD PIPING	BD-C0234	Pipe	3/13/2017
BD PIPING	BD-C0251	Pipe	3/13/2017
BD PIPING	BD-C0252	Pipe	3/13/2017
BD PIPING	BD-C0254	Pipe	3/13/2017
BD PIPING	BD-C0342	Pipe	3/10/2017
BD PIPING	BD-C0343	Pipe	3/10/2017
BD PIPING	BD-C0233	Pipe	3/9/2017
BD PIPING	BD-C0255	Pipe	3/9/2017
BD PIPING	BD-C0347	Pipe	3/9/2017
BD PIPING	BD-C0348	Pipe	3/9/2017
BD PIPING	BD-C0271	Pipe	3/8/2017
BD PIPING	BD-C0273	Pipe	3/8/2017
BD PIPING	BD-C0288	Pipe	3/8/2017
BD PIPING	BD-C0290	Pipe	3/8/2017
BD PIPING	BD-C0316	Pipe	3/8/2017
BD PIPING	BD-C0349	Pipe	3/8/2017
BD PIPING	BD-C0266	Pipe	3/7/2017
BD PIPING	BD-C0268	Pipe	3/7/2017

BD PIPING	BD-C0277	Pipe	3/7/2017
BD PIPING	BD-C0287	Pipe	3/7/2017
BD PIPING	BD-C0272	Pipe	3/6/2017
BD PIPING	BD-C0274	Pipe	3/6/2017
BD PIPING	BD-C0301	Pipe	3/6/2017
BD PIPING	BD-C0303	Pipe	3/6/2017
BD PIPING	BD-C0306	Pipe	3/6/2017
BD PIPING	BD-C0302	Pipe	3/3/2017
BD PIPING	BD-C0304	Pipe	3/3/2017
BD PIPING	BD-C0305	Pipe	3/3/2017
BD PIPING	BD-C0344	Pipe	3/3/2017
BD PIPING	BD-C0346	Pipe	3/3/2017
BD PIPING	BD-C0153	Pipe	3/2/2017
BD PIPING	BD-C0163	Pipe	3/2/2017
BD PIPING	BD-C0183	Pipe	3/2/2017
BD PIPING	BD-C0213	Pipe	3/2/2017
BD PIPING	BD-C0300	Pipe	3/2/2017
DIB	DIB-C0210A	Pipe	3/2/2017
BD PIPING	BD-C0094	Pipe	3/1/2017
BD PIPING	BD-C0258	Pipe	3/1/2017
BD PIPING	BD-C0382	Pipe	3/1/2017
BD PIPING	BD-C0413	Pipe	3/1/2017
METH	METH-C0009	Pipe	3/1/2017
BD PIPING	BD-C0126	Pipe	2/28/2017
BD PIPING	BD-C0144	Pipe	2/28/2017
BD PIPING	BD-C0145	Pipe	2/28/2017
BD PIPING	BD-C0256	Pipe	2/28/2017
BD PIPING	BD-C0257	Pipe	2/28/2017
BD PIPING	BD-C0320	Pipe	2/28/2017
FRFRL	FRFRL-C0035	Pipe	2/28/2017
RAFF PIPING	RAFF-C0047	Pipe	2/28/2017
BD PIPING	BD-C0051	Pipe	2/27/2017
BD PIPING	BD-C0091	Pipe	2/27/2017
BD PIPING	BD-C0116	Pipe	2/27/2017
BD PIPING	BD-C0117	Pipe	2/27/2017
FRFRL	FRFRL-C0027	Pipe	2/27/2017
FRFRL	FRFRL-C0091	Pipe	2/27/2017
BD PIPING	BD-C0029	Pipe	2/24/2017
BD PIPING	BD-C0124	Pipe	2/24/2017
BD PIPING	BD-C0330	Pipe	2/24/2017

FRFRL	FRFRL-C0014	Pipe	2/24/2017
SYSTEM#13 RED-GA	02	Pipe	2/23/2017
SYSTEM#28 NG	16	Pipe	2/23/2017
SYSTEM#28 NG	18	Pipe	2/23/2017
SYSTEM#28 NG	21	Pipe	2/23/2017
SYSTEM#28 NG	22	Pipe	2/23/2017
BD PIPING	BD-C0054	Pipe	2/23/2017
BD PIPING	BD-C0055	Pipe	2/23/2017
BD PIPING	BD-C0105	Pipe	2/23/2017
BD PIPING	BD-C0046	Pipe	2/22/2017
BD PIPING	BD-C0058	Pipe	2/22/2017
BD PIPING	BD-C0311	Pipe	2/22/2017
BD PIPING	BD-C0410	Pipe	2/22/2017
BD PIPING	BD-C0059	Pipe	2/21/2017
BD PIPING	BD-C0060	Pipe	2/21/2017
BD PIPING	BD-C0113	Pipe	2/21/2017
FRFRL	FRFRL-C0017	Pipe	2/21/2017
METH	METH-C0002	Pipe	2/21/2017
BD PIPING	BD-C0001	Pipe	2/20/2017
BD PIPING	BD-C0009	Pipe	2/20/2017
BD PIPING	BD-C0384	Pipe	2/20/2017
BD PIPING	BD-C0401	Pipe	2/20/2017
BD PIPING	BD-C0337A	Pipe	2/17/2017
BD PIPING	BD-C0356	Pipe	2/17/2017
BD PIPING	BD-C0317	Pipe	2/16/2017
BD PIPING	BD-C0321	Pipe	2/16/2017
BD PIPING	BD-C0357	Pipe	2/16/2017
FRFRL	FRFRL-C0011	Pipe	2/16/2017
MTBE	MTBE-C0039	Pipe	2/16/2017
MTBE	MTBE-C0043A	Pipe	2/16/2017
MTBE	MTBE-C0050	Pipe	2/16/2017
MTBE	MTBE-C0052	Pipe	2/16/2017
BD PIPING	BD-C0010	Pipe	2/15/2017
BD PIPING	BD-C0310	Pipe	2/15/2017
BD PIPING	BD-C0312	Pipe	2/15/2017
BD PIPING	BD-C0339	Pipe	2/15/2017
FRFRL	FRFRL-C0023	Pipe	2/15/2017
MTBE	MTBE-C0043	Pipe	2/15/2017
MTBE	MTBE-C0051	Pipe	2/15/2017
BD PIPING	BD-C0019	Pipe	2/14/2017

BD PIPING	BD-C0132	Pipe	2/14/2017
BD PIPING	BD-C0270	Pipe	2/14/2017
BD PIPING	BD-C0275	Pipe	2/14/2017
BD PIPING	BD-C0276	Pipe	2/14/2017
BD PIPING	BD-C0002	Pipe	2/13/2017
BD PIPING	BD-C0102	Pipe	2/13/2017
BD PIPING	BD-C0103	Pipe	2/13/2017
BD PIPING	BD-C0104	Pipe	2/13/2017
BD PIPING	BD-C0351	Pipe	2/13/2017
BD PIPING	BD-C0325	Pipe	2/10/2017
BD PIPING	BD-C0045	Pipe	2/9/2017
BD PIPING	BD-C0066	Pipe	2/9/2017
BD PIPING	BD-C0083	Pipe	2/9/2017
BD PIPING	BD-C0136	Pipe	2/9/2017
BD PIPING	BD-C0324	Pipe	2/9/2017
BD PIPING	BD-C0326	Pipe	2/9/2017
BD PIPING	BD-C0340	Pipe	2/9/2017
BD PIPING	BD-C0355	Pipe	2/9/2017
BD PIPING	BD-C0021	Pipe	2/8/2017
BD PIPING	BD-C0027	Pipe	2/8/2017
BD PIPING	BD-C0033	Pipe	2/8/2017
BD PIPING	BD-C0034	Pipe	2/8/2017
BD PIPING	BD-C0137	Pipe	2/8/2017
BD PIPING	BD-C0309	Pipe	2/8/2017
BD PIPING	BD-C0353	Pipe	2/8/2017
BD PIPING	BD-C0354	Pipe	2/8/2017
BD PIPING	BD-C0039	Pipe	2/7/2017
BD PIPING	BD-C0135	Pipe	2/7/2017
BD PIPING	BD-C0307	Pipe	2/7/2017
BD PIPING	BD-C0308	Pipe	2/7/2017
BD PIPING	BD-C0327	Pipe	2/7/2017
RAFF PIPING	RAFF-C0066	Pipe	2/7/2017
RAFF PIPING	RAFF-C0069	Pipe	2/7/2017
BD PIPING	BD-C0044	Pipe	2/6/2017
BD PIPING	BD-C0133	Pipe	2/6/2017
BD PIPING	BD-C0134	Pipe	2/6/2017
BD PIPING	BD-C0285	Pipe	2/6/2017
BD PIPING	BD-C0292	Pipe	2/6/2017
RAFF PIPING	RAFF-C0055	Pipe	2/6/2017
RAFF PIPING	RAFF-C0071	Pipe	2/6/2017

BD PIPING	BD-C0023	Pipe	2/3/2017
MTBE	MTBE-C0047	Pipe	2/3/2017
SYSTEM#1 HCFEED	03	Pipe	2/2/2017
BD PIPING	BD-C0030	Pipe	2/2/2017
BD PIPING	BD-C0031	Pipe	2/2/2017
BD PIPING	BD-C0040	Pipe	2/2/2017
BD PIPING	BD-C0061	Pipe	2/2/2017
BD PIPING	BD-C0299	Pipe	2/2/2017
RAFF PIPING	RAFF-C0007	Pipe	2/2/2017
RAFF PIPING	RAFF-C0017	Pipe	2/2/2017
RAFF PIPING	RAFF-C0025B	Pipe	2/2/2017
SYSTEM#28 NG	15	Pipe	2/1/2017
BD PIPING	BD-C0049	Pipe	2/1/2017
BD PIPING	BD-C0249	Pipe	2/1/2017
BD PIPING	BD-C0298	Pipe	2/1/2017
BD PIPING	BD-C0392	Pipe	2/1/2017
BD PIPING	BD-C0048	Pipe	1/31/2017
BD PIPING	BD-C0064	Pipe	1/31/2017
FLR	FLR-C0890O	Pipe	1/31/2017
FRFRL	FRFRL-C0002	Pipe	1/31/2017
FRFRL	FRFRL-C0015	Pipe	1/31/2017
RAFF PIPING	RAFF-C0009	Pipe	1/31/2017
BD PIPING	BD-C0143	Pipe	1/30/2017
BD PIPING	BD-C0245	Pipe	1/30/2017
BD PIPING	BD-C0246	Pipe	1/30/2017
BD PIPING	BD-C0338	Pipe	1/30/2017
FRFRL	FRFRL-C0028	Pipe	1/30/2017
RAFF PIPING	RAFF-C0075	Pipe	1/30/2017
BD PIPING	BD-C0359	Pipe	1/27/2017
SYSTEM#15 STPR	07	Pipe	1/26/2017
BD PIPING	BD-C0004	Pipe	1/26/2017
BD PIPING	BD-C0036	Pipe	1/26/2017
BD PIPING	BD-C0079	Pipe	1/26/2017
BD PIPING	BD-C0119	Pipe	1/26/2017
RAFF PIPING	RAFF-C0072	Pipe	1/26/2017
RAFF PIPING	RAFF-C0076	Pipe	1/26/2017
BD PIPING	BD-C0385	Pipe	1/25/2017
FLR	FLR-C0890P	Pipe	1/25/2017
BD PIPING	BD-C0125	Pipe	1/24/2017
BD PIPING	BD-C0128	Pipe	1/24/2017

FLR	FLR-C0890M	Pipe	1/24/2017
RAFF PIPING	RAFF-C0053	Pipe	1/23/2017
RAFF PIPING	RAFF-C0057	Pipe	1/19/2017
RAFF PIPING	RAFF-C0058	Pipe	1/19/2017
BD PIPING	BD-C0396	Pipe	1/18/2017
BD PIPING	BD-C0397	Pipe	1/18/2017
FLR	FLR-C0890C	Pipe	1/18/2017
BD PIPING	BD-C0038	Pipe	1/17/2017
BD PIPING	BD-C0074	Pipe	1/17/2017
BD PIPING	BD-C0080	Pipe	1/17/2017
BD PIPING	BD-C0333	Pipe	1/17/2017
BD PIPING	BD-C0334	Pipe	1/17/2017
BD PIPING	BD-C0394	Pipe	1/17/2017
FRFRL	FRFRL-C0010	Pipe	1/17/2017
RAFF PIPING	RAFF-C0036	Pipe	1/17/2017
RAFF PIPING	RAFF-C0045	Pipe	1/17/2017
BD PIPING	BD-C0088	Pipe	1/16/2017
BD PIPING	BD-C0089	Pipe	1/16/2017
BD PIPING	BD-C0090	Pipe	1/16/2017
BD PIPING	BD-C0129	Pipe	1/16/2017
BD PIPING	BD-C0205	Pipe	1/16/2017
BD PIPING	BD-C0331	Pipe	1/16/2017
BD PIPING	BD-C0335	Pipe	1/16/2017
METH	METH-C0001	Pipe	1/16/2017
RAFF PIPING	RAFF-C0012	Pipe	1/16/2017
RAFF PIPING	RAFF-C0061	Pipe	1/16/2017
BD PIPING	BD-C0101	Pipe	1/14/2017
BD PIPING	BD-C0398	Pipe	1/13/2017
BD PIPING	BD-C0400	Pipe	1/13/2017
MTBE	MTBE-C0036	Pipe	1/13/2017
BD PIPING	BD-C0092	Pipe	1/12/2017
BD PIPING	BD-C0096	Pipe	1/12/2017
BD PIPING	BD-C0151	Pipe	1/12/2017
BD PIPING	BD-C0323	Pipe	1/12/2017
BD PIPING	BD-C0332	Pipe	1/12/2017
BD PIPING	BD-C0390	Pipe	1/12/2017
BD PIPING	BD-C0391	Pipe	1/12/2017
BD PIPING	BD-C0026	Pipe	1/11/2017
BD PIPING	BD-C0084	Pipe	1/11/2017
BD PIPING	BD-C0085	Pipe	1/11/2017

BD PIPING	BD-C0086	Pipe	1/11/2017
BD PIPING	BD-C0093	Pipe	1/11/2017
BD PIPING	BD-C0100	Pipe	1/11/2017
BD PIPING	BD-C0386	Pipe	1/11/2017
BD PIPING	BD-C0387	Pipe	1/11/2017
BD PIPING	BD-C0011	Pipe	1/10/2017
BD PIPING	BD-C0041	Pipe	1/10/2017
BD PIPING	BD-C0043	Pipe	1/10/2017
BD PIPING	BD-C0073	Pipe	1/10/2017
BD PIPING	BD-C0075	Pipe	1/10/2017
BD PIPING	BD-C0082	Pipe	1/10/2017
FRFRL	FRFRL-C0016	Pipe	1/9/2017
FRFRL	FRFRL-C0020	Pipe	1/9/2017
METH	METH-C0007	Pipe	1/9/2017
RAFF PIPING	RAFF-C0051	Pipe	1/9/2017
BD PIPING	BD-C0062	Pipe	1/5/2017
BD PIPING	BD-C0409	Pipe	1/5/2017
FRFRL	FRFRL-C0112	Pipe	1/5/2017
FRFRL	FRFRL-C0126	Pipe	1/5/2017
IBTYLN	IBTYLN-C0091B	Pipe	1/5/2017
MTBE	MTBE-C0019	Pipe	1/5/2017
RAFF PIPING	RAFF-C0060	Pipe	1/5/2017
BD PIPING	BD-C0314	Pipe	1/4/2017
BD PIPING	BD-C0328	Pipe	1/4/2017
BD PIPING	BD-C0393	Pipe	1/4/2017
FRFRL	FRFRL-C0107	Pipe	1/4/2017
FRFRL	FRFRL-C0121	Pipe	1/4/2017
FRFRL	FRFRL-C0123	Pipe	1/4/2017
H20-FRFRL	H2OF-C0180A	Pipe	1/4/2017
H20-FRFRL	H2OF-C0180B	Pipe	1/4/2017
SYSTEM#23 STEAM	02	Pipe	1/3/2017
SYSTEM#23 STEAM	06	Pipe	1/3/2017
SYSTEM#23 STEAM	17	Pipe	1/3/2017
BD PIPING	BD-C0313	Pipe	1/3/2017
BD PIPING	BD-C0318	Pipe	1/3/2017
FRFRL	FRFRL-C0007	Pipe	1/3/2017
FRFRL	FRFRL-C0008	Pipe	1/3/2017
FRFRL	FRFRL-C0009	Pipe	1/3/2017
FRFRL	FRFRL-C0030	Pipe	1/3/2017
FRFRL	FRFRL-C0101	Pipe	1/3/2017

FRFRL	FRFRL-C0106	Pipe	1/3/2017
PPWW	PIB-C0010C	Pipe	1/3/2017
SYSTEM#23 STEAM	05	Pipe	12/30/2016
SYSTEM#23 STEAM	04	Pipe	12/28/2016
FRFRL	FRFRL-C0022	Pipe	12/28/2016
FRFRL	FRFRL-C0109	Pipe	12/28/2016
RAFF PIPING	RAFF-C0070	Pipe	12/28/2016
SYSTEM#13 RED-GA	01	Pipe	12/27/2016
SYSTEM#24 STEAM	01	Pipe	12/27/2016
BD PIPING	BD-C0095	Pipe	12/27/2016
BD PIPING	BD-C0099	Pipe	12/27/2016
FRFRL	FRFRL-C0029	Pipe	12/27/2016
SYSTEM#23 STEAM	01	Pipe	12/21/2016
SYSTEM#17 5040VH	05	Pipe	12/21/2016
SYSTEM#22 CWR	11	Pipe	12/21/2016
SYSTEM#21 CWS	12	Pipe	12/21/2016
SYSTEM#28 NG	12	Pipe	12/21/2016
SYSTEM#28 NG	13	Pipe	12/21/2016
SYSTEM#28 NG	14	Pipe	12/21/2016
SYSTEM#28 NG	08	Pipe	12/20/2016
SYSTEM#28 NG	09	Pipe	12/20/2016
SYSTEM#28 NG	10	Pipe	12/20/2016
SYSTEM#25 STEAM	11	Pipe	12/20/2016
SYSTEM#28 NG	11	Pipe	12/20/2016
SYSTEM#5 COMP	23	Pipe	12/20/2016
SYSTEM#24 STEAM	02	Pipe	12/19/2016
SYSTEM#24 STEAM	03	Pipe	12/15/2016
SYSTEM#1 HCFEED	04	Pipe	12/15/2016
SYSTEM#24 STEAM	04	Pipe	12/15/2016
SYSTEM#2 REO	01	Pipe	12/14/2016
SYSTEM#20 MISC	02	Pipe	12/14/2016
SYSTEM#1 HCFEED	05	Pipe	12/14/2016
SYSTEM#9 QUENCH	05	Pipe	12/14/2016
SYSTEM#20 MISC	01	Pipe	12/13/2016
SYSTEM#3 AIRFEED	01	Pipe	12/13/2016
SYSTEM#17 5040VH	04	Pipe	12/13/2016
SYSTEM#17 5040VH	06	Pipe	12/13/2016
SYSTEM#22 CWR	06	Pipe	12/13/2016
SYSTEM#17 5040VH	07	Pipe	12/13/2016
SYSTEM#22 CWR	07	Pipe	12/13/2016

SYSTEM#9 QUENCH	11	Pipe	12/13/2016
SYSTEM#9 QUENCH	13	Pipe	12/13/2016
SYSTEM#4 RAE	01	Pipe	12/12/2016
SYSTEM#3 AIRFEED	02	Pipe	12/12/2016
SYSTEM#17 5040VH	03	Pipe	12/12/2016
SYSTEM#17 5040VH	08	Pipe	12/12/2016
SYSTEM#17 5040VH	09	Pipe	12/12/2016
SYSTEM#17 5040VH	10	Pipe	12/12/2016
BD PIPING	BD-C0127	Pipe	12/12/2016
SYSTEM#26 STEAM-	05	Pipe	12/8/2016
SYSTEM#26 STEAM-	06	Pipe	12/8/2016
SYSTEM#26 STEAM-	07	Pipe	12/8/2016
SYSTEM#26 STEAM-	08	Pipe	12/8/2016
SYSTEM#23 STEAM	08	Pipe	12/1/2016
SYSTEM#18 505DPS	17	Pipe	12/1/2016
SYSTEM#14 RO	03	Pipe	11/28/2016
SYSTEM#5 COMP	19	Pipe	11/28/2016
H20-FRFRL	H2OF-C0280A	Pipe	11/28/2016
SYSTEM#14 RO	02	Pipe	11/22/2016
SYSTEM#14 RO	04	Pipe	11/21/2016
SYSTEM#9 QUENCH	04	Pipe	11/21/2016
SYSTEM#19 REVH	01	Pipe	11/17/2016
SYSTEM#15 STPR	12	Pipe	11/17/2016
SYSTEM#14 RO	08	Pipe	11/15/2016
SYSTEM#22 CWR	08	Pipe	11/14/2016
SYSTEM#16 LN	09	Pipe	11/14/2016
SYSTEM#12 QOR	04	Pipe	11/8/2016
SYSTEM#12 QOR	01	Pipe	11/3/2016
SYSTEM#18 505DPS	13	Pipe	11/3/2016
SYSTEM#28 NG	01	Pipe	11/2/2016
SYSTEM#21 CWS	05	Pipe	11/2/2016
SYSTEM#14 RO	06	Pipe	11/2/2016
SYSTEM#28 NG	06	Pipe	11/2/2016
SYSTEM#14 RO	07	Pipe	11/2/2016
SYSTEM#7 ABS-INT	08	Pipe	11/2/2016
SYSTEM#18 505DPS	09	Pipe	11/2/2016
SYSTEM#18 505DPS	10	Pipe	11/2/2016
SYSTEM#18 505DPS	11	Pipe	11/2/2016
SYSTEM#18 505DPS	12	Pipe	11/2/2016
SYSTEM#18 505DPS	14	Pipe	11/2/2016

SYSTEM#21 CWS	07	Pipe	11/1/2016
SYSTEM#18 505DPS	08	Pipe	11/1/2016
SYSTEM#21 CWS	13	Pipe	11/1/2016
PIB	PIB-C0005	Pipe	11/1/2016
SYSTEM#14 RO	01	Pipe	10/31/2016
SYSTEM#18 505DPS	03	Pipe	10/31/2016
SYSTEM#28 NG	04	Pipe	10/31/2016
SYSTEM#18 505DPS	05	Pipe	10/31/2016
SYSTEM#18 505DPS	06	Pipe	10/31/2016
SYSTEM#21 CWS	09	Pipe	10/31/2016
SYSTEM#22 CWR	12	Pipe	10/28/2016
SYSTEM#22 CWR	03	Pipe	10/27/2016
SYSTEM#21 CWS	06	Pipe	10/27/2016
SYSTEM#18 505DPS	07	Pipe	10/27/2016
SYSTEM#15 STPR	09	Pipe	10/27/2016
SYSTEM#5 COMP	01	Pipe	10/26/2016
SYSTEM#12 QOR	03	Pipe	10/26/2016
SYSTEM#9 QUENCH	03	Pipe	10/26/2016
SYSTEM#18 505DPS	01	Pipe	10/25/2016
SYSTEM#22 CWR	02	Pipe	10/25/2016
SYSTEM#9 QUENCH	02	Pipe	10/25/2016
SYSTEM#6 H20	06	Pipe	10/25/2016
SYSTEM#18 505DPS	15	Pipe	10/25/2016
SYSTEM#18 505DPS	16	Pipe	10/25/2016
SYSTEM#21 CWS	01	Pipe	10/24/2016
SYSTEM#18 505DPS	02	Pipe	10/24/2016
SYSTEM#21 CWS	02	Pipe	10/24/2016
SYSTEM#21 CWS	03	Pipe	10/24/2016
SYSTEM#5 COMP	15	Pipe	10/24/2016
SYSTEM#5 COMP	16	Pipe	10/24/2016
SYSTEM#5 COMP	13	Pipe	10/20/2016
SYSTEM#5 COMP	14	Pipe	10/20/2016
SYSTEM#5 COMP	17	Pipe	10/20/2016
SYSTEM#15 STPR	03	Pipe	10/19/2016
SYSTEM#8 OFF-GAS	03	Pipe	10/19/2016
SYSTEM#15 STPR	04	Pipe	10/19/2016
SYSTEM#15 STPR	05	Pipe	10/19/2016
SYSTEM#9 QUENCH	06	Pipe	10/19/2016
SYSTEM#5 COMP	18	Pipe	10/19/2016
SYSTEM#5 COMP	20	Pipe	10/19/2016

SYSTEM#5 COMP	21	Pipe	10/19/2016
SYSTEM#8 OFF-GAS	01	Pipe	10/18/2016
SYSTEM#8 OFF-GAS	02	Pipe	10/18/2016
SYSTEM#5 COMP	12	Pipe	10/18/2016
SYSTEM#12 QOR	02	Pipe	10/17/2016
SYSTEM#7 ABS-INT	13	Pipe	10/17/2016
SYSTEM#7 ABS-INT	14	Pipe	10/17/2016
SYSTEM#5 COMP	08	Pipe	10/14/2016
SYSTEM#5 COMP	09	Pipe	10/14/2016
SYSTEM#7 ABS-INT	10	Pipe	10/14/2016
SYSTEM#7 ABS-INT	11	Pipe	10/14/2016
SYSTEM#5 COMP	05	Pipe	10/13/2016
SYSTEM#5 COMP	07	Pipe	10/13/2016
SYSTEM#7 ABS-INT	09	Pipe	10/13/2016
SYSTEM#5 COMP	03	Pipe	10/12/2016
SYSTEM#5 COMP	04	Pipe	10/12/2016
SYSTEM#5 COMP	06	Pipe	10/12/2016
SYSTEM#7 ABS-INT	06	Pipe	10/12/2016
RAFF PIPING	RAFF-C0011	Pipe	10/12/2016
SYSTEM#7 ABS-INT	03	Pipe	10/11/2016
SYSTEM#7 ABS-INT	05	Pipe	10/11/2016
SYSTEM#7 ABS-INT	01	Pipe	10/10/2016
SYSTEM#7 ABS-INT	02	Pipe	10/10/2016
SYSTEM#7 ABS-INT	04	Pipe	10/10/2016
SYSTEM#5 COMP	10	Pipe	10/10/2016
SYSTEM#5 COMP	11	Pipe	10/10/2016
RAFF PIPING	RAFF-C0035	Pipe	10/10/2016
SYSTEM#6 H20	04	Pipe	10/6/2016
SYSTEM#6 H20	05	Pipe	10/6/2016
SYSTEM#5 COMP	02	Pipe	10/5/2016
SYSTEM#6 H20	02	Pipe	10/5/2016
SYSTEM#1 HCFEED	02	Pipe	10/4/2016
PIB	PIB-C0009	Pipe	9/30/2016
BD PIPING	BD-C0024	Pipe	9/29/2016
PIB	PIB-C0022	Pipe	9/29/2016
SYSTEM#1 HCFEED	01	Pipe	9/28/2016
BD PIPING	BD-C0022	Pipe	9/28/2016
PIB	PIB-C0006	Pipe	9/27/2016
PIB	PIB-C0014	Pipe	9/27/2016
METH	METH-C0010	Pipe	9/26/2016

METH	METH-C0011	Pipe	9/26/2016
PIB	PIB-C0015	Pipe	9/26/2016
FRFRL	FRFRL-C0120	Pipe	9/23/2016
PIB	PIB-C0002	Pipe	9/22/2016
PIB	PIB-C0003	Pipe	9/21/2016
PIB	PIB-C0004	Pipe	9/20/2016
PIB	PIB-C0024	Pipe	9/20/2016
METH	METH-C0008	Pipe	9/19/2016
FRFRL	FRFRL-C0088	Pipe	9/14/2016
MTBE	MTBE-C0011	Pipe	9/14/2016
RAFF PIPING	RAFF-C0032	Pipe	9/14/2016
FRFRL	FRFRL-C0019	Pipe	9/13/2016
FRFRL	FRFRL-C0033	Pipe	9/13/2016
FRFRL	FRFRL-C0125	Pipe	9/12/2016
MTBE	MTBE-C0010	Pipe	9/12/2016
RAFF PIPING	RAFF-C0063	Pipe	9/12/2016
RAFF PIPING	RAFF-C0065	Pipe	9/12/2016
RAFF PIPING	RAFF-C0073	Pipe	9/12/2016
RAFF PIPING	RAFF-C0067	Pipe	9/8/2016
RAFF PIPING	RAFF-C0068	Pipe	9/8/2016
BD PIPING	BD-C0077	Pipe	9/6/2016
MTBE	MTBE-C0018	Pipe	9/6/2016
RAFF PIPING	RAFF-C0028	Pipe	8/31/2016
FRFRL	FRFRL-C0026	Pipe	8/29/2016
MTBE	MTBE-C0056	Pipe	8/29/2016
RAFF PIPING	RAFF-C0034	Pipe	8/29/2016
METH	METH-C0018A	Pipe	8/25/2016
RAFF PIPING	RAFF-C0054	Pipe	8/22/2016
RAFF PIPING	RAFF-C0030B	Pipe	8/17/2016
RAFF PIPING	RAFF-C0004	Pipe	8/16/2016
RAFF PIPING	RAFF-C0019	Pipe	8/1/2016
PPWW	PIB-C0010J	Pipe	7/21/2016
MTBE	MTBE-C0035	Pipe	7/19/2016
MTBE	MTBE-C0012	Pipe	7/12/2016
FRFRL	FRFRL-C0036	Pipe	7/11/2016
HCSLOP	HCSLOP-C0160B	Pipe	7/7/2016
RAFF PIPING	RAFF-C0002	Pipe	7/5/2016
BD PIPING	BD-C0389	Pipe	6/15/2016
HCSLOP	HCSLOP-C0040E	Pipe	6/15/2016
B1	B1-C0200Q	Pipe	6/14/2016

BD PIPING	BD-C0078	Pipe	6/14/2016
HCSLOP	HCSLOP-C0040A	Pipe	6/14/2016
IBTYLN	IBTYLN-C0540F	Pipe	6/14/2016
MTBE	MTBE-C0027	Pipe	6/14/2016
RAF-MTBE	RAF-MTBE-C0003	Pipe	5/11/2016
MTBE	MTBE-C0032	Pipe	5/6/2016
RAFF PIPING	RAFF-C0025A	Pipe	5/6/2016
RAFF PIPING	RAFF-C0025C	Pipe	5/6/2016
RAFF PIPING	RAFF-C0027	Pipe	5/6/2016
RAFF PIPING	RAFF-C0062	Pipe	5/6/2016
BD PIPING	BD-C0057	Pipe	5/5/2016
HCVENT	HCVENT-C0001	Pipe	5/5/2016
HCSLOP	HCSLOP-C0030B	Pipe	4/25/2016
MTBE	MTBE-C0043B	Pipe	4/21/2016
PPWW	PIB-C0010E	Pipe	4/21/2016
PPWW	PIB-C0010D	Pipe	4/19/2016
RAF-MTBE	RAF-MTBE-C0001	Pipe	4/19/2016
IBTYLN	IBTYLN-C0710C	Pipe	4/14/2016
PPWW	PIB-C0010F	Pipe	4/14/2016
BD PIPING	BD-C0007	Pipe	4/6/2016
BD PIPING	BD-C0028	Pipe	4/6/2016
BD PIPING	BD-C0076	Pipe	4/6/2016
BD PIPING	BD-C0362	Pipe	4/6/2016
BD PIPING	BD-C0365	Pipe	4/6/2016
IBTYLN	IBTYLN-C0690A	Pipe	4/6/2016
IBTYLN	IBTYLN-C0690C	Pipe	4/6/2016
B2	B2-C0100B	Pipe	4/5/2016
BD PIPING	BD-C0337E	Pipe	4/5/2016
CBD	CBD-C0220A	Pipe	4/5/2016
H2	H2-C0010B	Pipe	4/5/2016
IBTYLN	IBTYLN-C0360C	Pipe	4/5/2016
MTBE	MTBE-C0021	Pipe	4/5/2016
NG	NG-C0040A	Pipe	3/31/2016
DIB	DIB-C0240A	Pipe	3/30/2016
METH	METH-C0003B	Pipe	3/7/2016
PIB	PIB-C0031A	Pipe	3/4/2016
BD PIPING	BD-C0337B	Pipe	2/4/2016
FLR	FLR-C0890J	Pipe	2/1/2016
MTBE	MTBE-C0061	Pipe	2/1/2016
FLR	FLR-C0890H	Pipe	1/28/2016

RAFF PIPING	RAFF-C0037E	Pipe	8/21/2015
RAFF PIPING	RAFF-C0037G	Pipe	8/21/2015
RAFF PIPING	RAFF-C0037R	Pipe	8/20/2015
CBD	CBD-C0330H	Pipe	6/2/2015
CBD	CBD-C0330I	Pipe	6/2/2015
CBD	CBD-C0330J	Pipe	6/2/2015
CBD	CBD-C0330K	Pipe	6/2/2015
CBD	CBD-C0330L	Pipe	6/2/2015
OLIG	OLIG-C0020A	Pipe	10/7/2014
OLIG	OLIG-C0030A	Pipe	10/7/2014
NG	NG-C0150A	Pipe	8/8/2014
PIB	PIB-C0029E	Pipe	2/11/2014
NG	NG-C0030D	Pipe	12/4/2013
NG	NG-C0130A	Pipe	11/19/2013
DIB	DIB-C0130A	Pipe	11/12/2013
DIB	DIB-C0150A	Pipe	11/12/2013
DIB	DIB-C0150B	Pipe	11/12/2013
NG	NG-C0060A	Pipe	11/5/2013
DMF	DMF-C0010A	Pipe	10/2/2013
DMF	DMF-C0020A	Pipe	10/2/2013
BD PIPING	BD-C0199	Pipe	9/11/2013
B2	B2-C0140B	Pipe	8/21/2013
C5	C5-C0070D	Pipe	8/16/2013
IBTYLN	IBTYLN-C0220B	Pipe	8/14/2013
IBTYLN	IBTYLN-C0010C	Pipe	8/2/2013
FLR	0880O	Pipe	7/17/2013
METH	METH-C0015B	Pipe	7/17/2013
METH	METH-C0015C	Pipe	7/16/2013
DIMER	DIMER-C0040C	Pipe	5/22/2013
DIMER	DIMER-C0040A	Pipe	5/21/2013
DIMER	DIMER-C0040B	Pipe	5/21/2013
DIMER	DIMER-C0040D	Pipe	5/21/2013
PIB	PIB-C0029A	Pipe	5/21/2013
PIB	PIB-C0038K	Pipe	5/15/2013
PIB	PIB-C0035A	Pipe	5/9/2013
PIB	PIB-C0035D	Pipe	5/8/2013
PIB	PIB-C0035E	Pipe	5/6/2013
B1	B1-C0220B	Pipe	4/18/2013
B1	B1-C0290D	Pipe	4/4/2013
LN	LN-C0250G	Pipe	2/27/2013

B1	B1-C0070E	Pipe	2/22/2013
B1	B1-C0171A	Pipe	2/22/2013
LN	LN-C0250D	Pipe	2/21/2013
B1	B1-C0270A	Pipe	2/11/2013
C5	C5-C0200A	Pipe	12/17/2012
HONWTR	HONWTR-C0170A	Pipe	12/17/2012
HONWTR	HONWTR-C0170E	Pipe	12/17/2012
HONWTR	HONWTR-C0170F	Pipe	12/17/2012
LN	LN-C0180D	Pipe	12/14/2012
LN	LN-C0250A	Pipe	12/14/2012
LN	LN-C0250B	Pipe	12/14/2012
LN	LN-C0250J	Pipe	12/14/2012
LN	LN-C0300A	Pipe	12/14/2012
H20-FRFRL	H2OF-C0160B	Pipe	12/12/2012
H20-FRFRL	H2OF-C0290A	Pipe	12/12/2012
LN	LN-C0200A	Pipe	12/12/2012
LN	LN-C0250L	Pipe	12/12/2012
LN	LN-C0300B	Pipe	12/12/2012
H20-FRFRL	H2OF-C0290E	Pipe	12/11/2012
H20-FRFRL	H2OF-C0300B	Pipe	12/11/2012
HONWTR	HONWTR-C0170B	Pipe	12/11/2012
LN	LN-C0260B	Pipe	12/11/2012
LN	LN-C0270A	Pipe	12/11/2012
LN	LN-C0020A	Pipe	12/10/2012
LN	LN-C0250F	Pipe	12/10/2012
LN	LN-C0250C	Pipe	12/8/2012
H20-FRFRL	H2OF-C0130A	Pipe	12/7/2012
H20-FRFRL	H2OF-C0160A	Pipe	12/7/2012
H20-FRFRL	H2OF-C0210A	Pipe	12/7/2012
H20-FRFRL	H2OF-C0220A	Pipe	12/6/2012
LN	LN-C0240A	Pipe	12/6/2012
LN	LN-C0250H	Pipe	12/6/2012
LN	LN-C0230D	Pipe	12/5/2012
LN	LN-C0230F	Pipe	12/5/2012
LN	LN-C0250K	Pipe	12/5/2012
LN	LN-C0210E	Pipe	12/4/2012
H20-FRFRL	H2OF-C0070A	Pipe	11/30/2012
H20-FRFRL	H2OF-C0140B	Pipe	11/30/2012
H20-FRFRL	H2OF-C0250A	Pipe	11/30/2012
H20-FRFRL	H2OF-C0260A	Pipe	11/30/2012

H20-FRFRL	H2OF-C0370A	Pipe	11/30/2012
LN	LN-C0090B	Pipe	11/30/2012
H20-FRFRL	H2OF-C0270A	Pipe	11/29/2012
H20-FRFRL	H2OF-C0140F	Pipe	11/28/2012
H20-FRFRL	H2OF-C0310A	Pipe	11/28/2012
H20-FRFRL	H2OF-C0310C	Pipe	11/28/2012
H20-FRFRL	H2OF-C0110D	Pipe	11/27/2012
H20-FRFRL	H2OF-C0120A	Pipe	11/27/2012
H20-FRFRL	H2OF-C0240A	Pipe	11/27/2012
H20-FRFRL	H2OF-C0080B	Pipe	11/26/2012
H20-FRFRL	H2OF-C0120B	Pipe	11/26/2012
H20-FRFRL	H2OF-C0140E	Pipe	11/26/2012
H20-FRFRL	0080A XTML	Pipe	11/20/2012
H20-FRFRL	H2OF-C0080C	Pipe	11/20/2012
H20-FRFRL	H2OF-C0090B	Pipe	11/20/2012
H20-FRFRL	H2OF-C0110F	Pipe	11/20/2012
H20-FRFRL	H2OF-C0340B	Pipe	11/20/2012
H20-FRFRL	H2OF-C0340C	Pipe	11/20/2012
H20-FRFRL	H2OF-C0370D	Pipe	11/20/2012
H20-FRFRL	H2OF-C0380A	Pipe	11/20/2012
H20-FRFRL	H2OF-C0090A	Pipe	11/19/2012
H20-FRFRL	H2OF-C0140C	Pipe	11/19/2012
H20-FRFRL	H2OF-C0350A	Pipe	11/19/2012
H20-FRFRL	H2OF-C0370B	Pipe	11/19/2012
H20-FRFRL	H2OF-C0370C	Pipe	11/19/2012
C5	C5-C0060B	Pipe	11/16/2012
H20-FRFRL	H2OF-C0280C	Pipe	11/16/2012
H20-FRFRL	H2OF-C0230A	Pipe	11/15/2012
H20-FRFRL	H2OF-C0320B	Pipe	11/15/2012
C5	C5-C0130A	Pipe	11/13/2012
H20-FRFRL	H2OF-C0100F	Pipe	11/12/2012
H20-FRFRL	H2OF-C0100G	Pipe	11/12/2012
H20-FRFRL	H2OF-C0130B	Pipe	11/12/2012
H20-FRFRL	H2OF-C0340A	Pipe	11/12/2012
H20-FRFRL	H2OF-C0390A	Pipe	11/12/2012
H20-FRFRL	H2OF-C0320F	Pipe	11/9/2012
H20-FRFRL	H2OF-C0360A	Pipe	11/9/2012
LN	LN-C0060B	Pipe	11/9/2012
C5	C5-C0010C	Pipe	11/5/2012
C5	C5-C0010A	Pipe	11/1/2012

C5	C5-C0140A	Pipe	11/1/2012
C5	C5-C0050B	Pipe	10/31/2012
C5	C5-C0200B	Pipe	10/31/2012
H20-FRFRL	H2OF-C0310E	Pipe	10/30/2012
H20-FRFRL	H2OF-C0320A	Pipe	10/30/2012
H20-FRFRL	H2OF-C0100C	Pipe	10/29/2012
H20-FRFRL	H2OF-C0290B	Pipe	10/29/2012
H20-FRFRL	H2OF-C0290C	Pipe	10/29/2012
H20-FRFRL	H2OF-C0330A	Pipe	10/29/2012
H20-FRFRL	H2OF-C0100D	Pipe	10/25/2012
H20-FRFRL	H2OF-C0320D	Pipe	10/25/2012
H20-FRFRL	H2OF-C0140G	Pipe	10/24/2012
H20-FRFRL	H2OF-C0100B	Pipe	10/23/2012
NM	NM-C0200B	Pipe	10/10/2012
NM	NM-C0160B	Pipe	10/9/2012
NM	NM-C0100A	Pipe	10/1/2012
NM	NM-C0100B	Pipe	10/1/2012
NM	NM-C0200C	Pipe	10/1/2012
NM	NM-C0180A	Pipe	9/26/2012
NM	NM-C0200A	Pipe	9/26/2012
NM	NM-C0160A	Pipe	9/20/2012
HONWTR	HONWTR-C0220F	Pipe	9/18/2012
HONWTR	HONWTR-C0220M	Pipe	9/18/2012
HONWTR	HONWTR-C0220G	Pipe	9/17/2012
HONWTR	HONWTR-C0220L	Pipe	9/17/2012
HONWTR	HONWTR-C0220B	Pipe	9/14/2012
HONWTR	HONWTR-C0220H	Pipe	9/14/2012
HONWTR	HONWTR-C0220K	Pipe	9/14/2012
FLR	FLR-C0940A	Pipe	9/12/2012
FLR	FLR-C0500T	Pipe	9/11/2012
HONWTR	HONWTR-C0220A	Pipe	9/11/2012
FLR	FLR-C0880D	Pipe	8/27/2012
FLR	FLR-C0880G	Pipe	8/16/2012
FLR	FLR-C0880J	Pipe	8/10/2012
FLR	FLR-C0480A	Pipe	8/9/2012
FLR	FLR-C0380C	Pipe	7/26/2012
HCSLOP	HCSLOP-C0100D	Pipe	7/26/2012
HCSLOP	HCSLOP-C0100E	Pipe	7/20/2012
HCSLOP	HCSLOP-C0100C	Pipe	7/19/2012
FLR	FLR-C0860H	Pipe	7/10/2012

FLR	FLR-C0170B	Pipe	7/9/2012
FLR	FLR-C0530A	Pipe	7/5/2012
FLR	FLR-C0870A	Pipe	7/5/2012
FLR	FLR-C0060B	Pipe	4/3/2012
RAFF PIPING	RAFF-C0052	Pipe	3/20/2012
FRFRL	FRFRL-C0127	Pipe	3/14/2012
BD PIPING	BD-C0379	Pipe	3/2/2012
BD PIPING	BD-C0358	Pipe	3/1/2012
RAFF PIPING	RAFF-C0059	Pipe	2/21/2012
BD PIPING	BD-C0035	Pipe	2/14/2012
PIB	PIB-C0001	Pipe	9/30/2011