Romic Environmental Technologies Corp.

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TSD Facility

Section D

Container and Tank Storage Units

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D PROCESS EQUIPMENT

This section, along with referenced tables, drawings, and data sheets, provide detailed descriptions, designs, and operating information for waste management equipment and devices (tanks, containers, secondary containment areas, and other ancillary equipment) used to store, consolidate, and treat hazardous wastes at the facility. The locations of facility container storage areas, tank systems, and treatment areas are shown on Figure D-1, Facility Layout. Waste management processes are described in Section E, Process Operations.

D1 Containers

Romic manages containerized hazardous waste in various areas. The location of each area within the facility is shown on Figure D-1. The container storage units are Building 1, described in Section D1.1 below, and Building 2, described in Section D1.2 below. Container management units other than storage units are described in Section D1.3 below.

D1.1 Building 1

D1.1.1 Containers with Free Liquids

40 CFR 270.15; 264.175(a), (b)

Romic stores containers, including containers with free liquids, in Building 1. Secondary containment is provided that meets the requirements of 40 CFR 264.175(b) (see Section D1.1.4 below), including sufficient secondary containment capacity for the case where every container in storage contains 100% free liquids.

D1.1.2 Description of Containers

40 CFR 270.14(b)(1); 264.171, 172

Building 1 can accommodate a maximum of 121,440 gallons of containerized waste. This may be comprised of:

- 2,208 55-gallon drums,
- 347 350-gallon totes, or
- A combination of drums, totes, and other containers of various capacities (e.g., 1-5 gallon pails, 16-30 gallon drums, 85-gallon salvage drums, cubic yard tri-walls, cylinders, canisters, and off spec/discarded material in original packaging).

Figure D-2 depicts the storage arrangement for Building 1 based on the case where 2,208 55-gallon drums are in storage. Other storage/stacking configurations may be exercised, as long as a minimum 24-inch aisle space between any double row of drums (two abreast), single row of totes or tri-wall boxes, or the equivalent is maintained.

Because hazardous wastes are generally regulated as hazardous materials under U.S. Department of Transportation (DOT) regulations, they are subject to packaging requirements in Title 49 of the Code of Federal Regulations. These requirements provide standards for the types of containers that may be used to transport hazardous materials and thus hazardous wastes. Containers received at Romic will generally be DOT-compliant. Hazardous wastes arriving at the facility in other than DOT-compliant containers will be processed or repackaged expeditiously.

Containers may be reused for repackaging or consolidation of waste if the container and its closures are in good condition. Acceptable condition is verified by inspecting the container for presence of severe rusting, apparent structural defects such as cracks or severe dents, or evidence of leaks, which disqualify containers from being reused.

The waste types to be managed in Building 1 include any waste identified on the Part A application. The bulk of the containerized wastes stored in this unit are organic liquids, organic and aqueous liquids, organic solids, inert materials, and lab packs. These wastes are generally compatible with each other or, in the case of lab packs, provide inherent physical separation/segregation of incompatibles.

The primary incompatibility concerns arise from the storage of non-lab packed oxidizers and corrosives. Containerized oxidizers may be isolated from ignitables using spill containment pallets. These pallets provide secondary containment in case of release from the primary container. Corrosives are segregated from flammables either by maintaining 20 feet of separation, storage in separate containment areas, or through the use of spill containment pallets.

D1.1.3 Container Management Practices

40 CFR 270.14(a); 264.173

Containers are inspected prior to unloading for signs of leakage and for proper closure of lids and bungs. If there are no signs of leakage or loose fittings, the containers of waste are unloaded from the transport vehicles by facility employees, typically using a forklift with a drum handling attachment. Containers that show signs of leaking will be overpacked or contained by other means prior to unloading. Other containers such as tote bins, tri-wall boxes, or supersacks will be unloaded using the appropriate forklift attachment. Containers are staged under the canopy or in Building 1 sampling area to await verification and the assignment of a waste tracking number. Containers may remain in the canopy area up to 10 days of receipt, and in Building 1 up to one year of the acceptance date on the tracking label. Typically, containers are removed from the canopy area, placed in Building 1 sampling area and assigned a tracking label within one working day of unloading. Once the material is sampled and a tracking label is assigned, the container may then be moved to the designated storage row within Building 1.

Romic's container tracking system is based on the assignment of a unique tracking number for each container. The tracking numbers are assigned by a computer program that cross references the unique tracking number with the profile number, the inbound manifest number and line item, the outbound manifest number and line item, any consolidation tracking numbers, if applicable, and the disposition of the material. The disposition of the material determines its storage location within Building 1, where the storage rows are arranged according to disposition. The tracking labels applied to containers upon arrival indicate the unique tracking number, the inbound manifest number and line item, the date of acceptance and a bar code to facilitate inventory.

The condition of drums and containers is first assessed when they are off-loaded, and then they are reinspected weekly during the routine inspections of the storage areas as described in Section F2.1, Inspection Requirements. Inspection of container storage areas is as indicated on Table F-1, Inspection Schedule. Inspection results are recorded as indicated on the Romic Weekly Inspection Form in Appendix F-1. Any containers showing evidence of leakage, corrosion or damage will be either placed in overpack drums, processed immediately, or the waste will be transferred into a container in acceptable condition as described in Section G7.3.1, Leaking Containers.

Containers of hazardous wastes may be opened to take a sample, for waste acceptance, characterization, or other purposes, to repackage or transfer waste into other containers, or to add waste from other containers or tanks. Also, containers may occasionally require venting to relieve internal pressure. Otherwise, containers will be maintained closed, with all closure devices in place and secure.

Romic receives wastes packaged by generators in DOT packaging if the waste qualifies as a DOT hazardous material. All hazardous waste is subject to DOT regulations when shipped. The DOT proper shipping name, including the packing group, as well as the type of shipping container, is identified on the waste profile and must be approved by Romic prior to the first shipment of waste to Romic. DOT regulations offer a variety of compatible containers and packaging options for hazardous materials. (See 49 CFR 172.101 and Part 173.) Romic accepts wastes in all forms of DOT approved packaging appropriate to the waste material. Section C4 discusses profiles and incoming waste acceptance. The predominant containers received by Romic are 55-gallon steel drums, followed by 55-gallon plastic drums, triwall boxes, supersacks, and other size steel and plastic drums. Additionally, cylinders, canisters, and off spec/discarded material in original packaging are also received.

Incompatible wastes, or wastes that are incompatible with other materials must not be placed in the same container with those materials, or into an unwashed container that previously held an incompatible waste or material. Prior to repacking or combining a waste, the profiles and analyses of the wastes to be combined must be checked to verify that the wastes are compatible. See Sections C4.5.1.3, C5.3.1 and C7.3 for discussion of profiles, fingerprint analyses (verification), and incompatible wastes.

Incompatible wastes are separated either by secondary containment systems such as spill containment pallets or lab packs (where the outer container provides secondary containment), or by distance in accordance with Uniform Fire Code (UFC) and/or DOT requirements. In general, the UFC requires 20 feet of separation between flammable materials and corrosives if no other physical means are used to separate them. DOT separation distances vary with the DOT hazard class of the material and its packaging.

Section F5, Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes discusses storage of incompatible materials. In Building 1, reactive (D003) and flammable (D001) wastes cannot be stored within 50 ft. of the property line as discussed below. Containers are stored in Building 1 based on compatibility by DOT hazard class and disposition.

Generally, flammable/combustible materials are stored with other flammable materials in rows destined for fuels, fuel blending, solid fuels, etc., and are separate from materials of other incompatible hazard classes. Most of the corrosives will be stored in designated bays in Building 2. Corrosives in Building 1 may be stored with other like corrosives (acids with other acids, bases with other bases) and/or non-hazardous and/or other compatible DOT hazard class materials in rows designated to specific dispositions (such as incineration), provided they are in proper DOT containers and stored in accordance with DOT separation requirements, or are lab packed in their own secondary containment. Spill containment pallets may be used instead of the 20 foot separation distance to separate corrosives from other materials. Universal wastes (batteries, light tubes, mercury containing materials) are stored with other similar universal wastes. Most of the reactive wastes (oxidizers, peroxides, etc.) will be stored in designated bays in Building 2. Reactive wastes in Building 1 may be stored with compatible materials in rows designated to specific dispositions, provided they are in proper DOT containers and stored in accordance with DOT separation requirements, or are lab packed in their own secondary containment.

Water reactive wastes usually come to Romic as lab packs, where the outer container provides complete secondary containment. Water reactive materials packaged in this manner do not require additional protection from the sprinkler system. PKP waterless fire extinguishers are available for use with water reactive materials. In the event that water reactive materials that are not packaged as lab packs need to be stored in Building 1, they will be placed on pallets and covered with a tarp to protect them from sprinkler water.

Romic facility personnel are trained in the proper handling of drums and containers. Romic makes use of forklifts, hand trucks (drum dollies), and pallet jacks to move containers and pallets bearing containers, and/or move containers by hand. Forklift drum-handling attachments are designed to safely transport two drums at a time without creating unnecessary stress or strain on the drums. This handling method guards against drum ruptures and leaks. Tote bins, tri-wall boxes, or supersacks will be picked up with forks on a forklift. Supersacks sometimes arrive at the facility on pallets. To handle these loads, the forklift operator will carefully lift the pallet making sure that the forks are below the supersack. Supersacks may also be handled using the integral straps provided on such containers.

Typically, 55-gallon drums are stacked in rows of two, two drums high in a pyramid type arrangement, where the top layer of drums is offset by half a drum diameter relative to the lower layer. This type of stacking has proven to be stable. A minimum aisle space of 24 inches is maintained between rows, with a larger aisle at the end of each row. This arrangement allows for the movement of emergency and fire equipment as well as providing access to each drum in the facility for inspection.

Tri-wall boxes and tote bins may also be stacked no more than two-high, provided the arrangement is stable. Containers that are smaller than 55-gallon drums may be stacked in such a configuration that the height does not exceed the height of two totes/tri-wall boxes. Typically, containers smaller than 55 gallon drums are stacked on top of 55 gallon drums in a manner which allows clear visibility of each tracking label, and complies with the height restrictions. Lab packs and other pails of waste materials may be stacked up to three pails high on pallets in a configuration that allows clear visibility of each tracking label.

In accordance with DOT regulations under Title 49 of the Code of Federal Regulations, intermediate bulk containers (IBC) are rigid or flexible portable packaging that may have a capacity of 119 gallons to 793 gallons. Typically Romic receives IBCs with a capacity of about 350 gallons. Such containers must meet the standards specified in Section 178 of 49 CFR. This includes, per 49 CFR 178.703(a)(1)(vi), the stacking test load (in kilograms) marked on the IBC. Romic will not double stack IBCs unless the stacking test load rating of the bottom IBC is at least 25 percent greater than (i.e., 1.25 times) the weight of the upper container.

Containers containing ignitable or reactive wastes will not be stored within fifty feet of the property line. The 50-foot setback line for Building 1 is depicted on Figure D-2. Marks have been placed on the walls at either end of the restricted area within Building 1, at a height visible above the container rows. Additionally, marks have been painted on the floor. Romic will not store ignitables or reactives to the northeast of this line.

D1.1.4 Secondary Containment System

40 CFR 270.15(a)(1)-(a)(5); 264.175(a), (b)(1)-(b)(5), (d)

Building 1 is a 11,900 square foot roofed structure, surrounded on three sides by building walls. Its containment slab is constructed of minimum 6" thick concrete with #5 rebar spaced 18" on center each way. Chemical resistant waterstops were installed at the cold joints in the slab. A 30 mil polyethylene liner was installed under the entire building during construction. The slab is constructed free of cracks or gaps and is sufficiently impervious to contain leaks, spills and accumulated precipitation. The south end is open and recessed. The minimum berm height for the entire containment area is 7 inches. Figure D-2 is a layout diagram of this unit. Drawing DSB pages 1 and 2 showing the design specifications for Building 1 are provided in Section P.

The storage area is sloped to drain to a low point in the north central portion of the unit (see Figure D-3). The containment area concrete is sufficiently impervious to contain leaks and spills until the spilled material can be removed. The concrete is currently coated with a high-build chemical resistant epoxy

coating to prevent staining of the underlying concrete from incidental spills; however there are areas of coating that need to be repaired. Coating repair/replacement will be made after permit issuance.

Building 1 is roofed and bermed to prevent incidental and run-on precipitation. Therefore, capacity provisions do not need to be made for water from precipitation. The containment area has sufficient capacity to contain 10% of the aggregate capacity of all containers in storage, which is greater than the capacity of the largest container to be stored. The largest container stored in Building #1 would be a 350-gallon intermediate bulk container (IBC, or "tote"). The aggregate capacity of containers in storage in Building #1 is 121,440 gallons. Table D-1 demonstrates that there is sufficient excess (net of displacement) capacity to contain 12,144 gallons within the secondary containment structure.

Fire protection in this building is provided by a sprinkler system using aqueous film-forming foam (AFFF). The Uniform Fire Code (UFC Section 8003.1.3.3) requires adequate secondary containment to contain capacity of the largest container to be stored in the area plus the design flow volume from the sprinkler system for a 20-minute period. Building # 1 has adequate secondary containment capacity to meet UFC requirements.

Any accumulated liquids in containment areas would be quickly observed. In addition to the formal, documented inspections conducted in accordance with Section F of this application, personnel who handle drums in the storage areas conduct informal inspections of the containers in storage each operating day.

Any leaks or spills occurring within containment areas are localized and removed as soon as possible. Accumulated liquids will drain toward the sump or low point in this containment area, although in most cases, small spills would be cleaned up before they can get to the low point. Most releases would be expected to be minor (less than one drum) and could be cleaned up with dry absorbent materials and/or a neutralizing agent depending on the nature of the released material. Large releases of hazardous waste would be handled as described in Section G.

Any storm water accumulations in the containment areas would be expected to be minimal, as the building is roofed. Any incidental water that accumulates will first be visually inspected for evidence of contamination, such as a sheen, odor, or discoloration. If any potential contamination is discovered, the source shall be investigated and the water will be either placed in a container and assigned an appropriate disposition code, or picked up by a vacuum tanker for transfer into an appropriate tank. The water will be pumped into an onsite storage tank for aqueous wastes. The water will be treated on-site in the Wastewater Treatment System or shipped off-site.

D1.1.5 Air Emission Standards

40 CFR 270.27(a)(2); 264.179, 264.1086

Containers stored in this unit include those subject to controls under Subpart CC: those subject to Container Level 1 controls, and those subject to Container Level 2 controls. Romic will not use containers to stabilize hazardous wastes containing 500 ppmw or more of volatile organic compounds (VOC), and

thus will not require Container Level 3 controls. There is no air emission control equipment associated with the storage of containers in Building 1. Containers are expected to remain closed while in storage, except for when they are sampled or consolidated, if applicable.

Containers not subject to controls under Subpart CC are those:

1. With a design capacity less than or equal to 0.1 m^3 (approximately 26 gallons), or

2. Managing hazardous waste with less than 500 ppmw volatile organic compounds (VOC).

Containers less than 26 gallons in capacity are identified visually based upon their overall dimensions.

To determine if waste contains less than 500 ppmw VOC, Romic will generally rely on information supplied by waste generators during the profiling process in making Subpart CC waste determinations for incoming wastes. Profiling and the pre-acceptance process are discussed in Section C4. Section C4.2 discusses the pre-waste acceptance sampling requirement where the generator provides a representative waste sample for Romic to analyze, and must certify on the profile that the sample submitted is representative of the waste stream. Incoming wastes are sampled and analyzed by Romic to verify that the waste matches the profile , as discussed in Sections C4 and C5. If Romic needs to evaluate a waste to determine if it contains less than 500 ppm of VOC, SW 846 method 8260 is used.

Romic will generally base Subpart CC waste determinations for Romic-generated waste on process knowledge. If there is any uncertainty regarding a Subpart CC waste determination, Romic will perform a waste determination in accordance with 40 CFR 264.1083.

Romic inspects all incoming containerized hazardous wastes as follows:

- Incoming containers with a capacity between 0.1 m^3 (26 gallons) and 0.46 m^3 (121 gallons) are inspected within 24 hours of acceptance into the facility, unless the waste is processed or repackaged within that time frame. The inspection and any necessary repairs will be conducted in accordance with Section D1.1.5.1 below.

- Incoming containers with a capacity of 0.46 m^3 or greater are inspected within 24 hours of acceptance into the facility, unless the waste is processed or repackaged within that time frame. The inspection and any necessary repairs will be conducted in accordance with Section D1.1.5.2 below.

D1.1.5.1 Containers < 0.46 m^3 Capacity

40 CFR 264.1086(c)

Containers with a capacity of less than 0.46 m^3, or approximately 121 gallons, will be inspected to ensure that all covers and closure devices are secured, and that there are no visible defects that would allow excess air emissions. Correction of any defects noted will be attempted within 24 hours of detection. Correction attempts will generally consist of securing a closure device (e.g., bung or drum ring and bolt).

If correction attempts are not successful or feasible, the waste will be processed (e.g., pumped into a tank) or repackaged into a sound (DOT-compliant) container within five days of defect detection.

D1.1.5.2 Containers ≥ 0.46 m3 Capacity

40 CFR 264.1086(c) and (d)

Containers with a capacity of 0.46 m^3 or greater will be inspected. Generally, the containers arriving at Romic meet U.S. Department of Transportation (DOT) regulations. Containers meeting DOT requirements will be inspected to ensure that all covers and closure devices are secured, and that there are no visible defects that would allow excess air emissions. Correction of any defects noted will be attempted within 24 hours of detection. Correction attempts will generally consist of securing a closure device (e.g., manway hatch). If correction attempts are not successful or feasible, the waste will be processed (e.g., pumped into a tank) or repackaged into a sound (DOT-compliant) container within five days of defect detection.

Romic receives wastes packaged by generators in DOT packaging if the waste qualifies as a DOT hazardous material. All hazardous waste is subject to DOT regulations when shipped. The DOT proper shipping name, including the packing group, as well as the type of shipping container, is identified on the waste profile and must be approved by Romic prior to the first shipment of waste to Romic. It is unlikely that light liquid organic materials would be approved for shipment to Romic in a non-DOT approved container.

Romic will generally rely on information supplied by waste generators during the profiling process in making Subpart CC waste determinations for incoming wastes. Profiling and the pre-acceptance process are discussed in Section C4. Section C4.2 discusses the pre-waste acceptance sampling requirement where the generator provides a representative waste sample for Romic to analyze, and must certify on the profile that the sample submitted is representative of the waste stream. Incoming wastes are sampled and analyzed by Romic to verify that the waste matches the profile , as discussed in Sections C4 and C5.

If a container with a capacity of 0.46 m^3 or greater is accepted at the facility and is found not to meet DOT regulations, the profile will be reviewed to determine the type of container approved for that waste, and if the container is in light material service. Light material service is where the total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight. The profile may explicitly describe a waste stream as light material, or it may require interpretation on the part of facility management. Facility management will use knowledge of the characteristics of the constituents on the profile, reference materials, or testing to determine whether a waste stream should be classified as light material.

If the container is not in light material service, it will be inspected to ensure that it has a cover and closure devices that form a continuous barrier over the container openings. Correction of any defects noted will be attempted within 24 hours of detection. If attempts at correction are not successful or feasible, the waste will be processed or repackaged into sound (DOT-compliant) containers within five days of defect detection.

If the (non-DOT) container is found to be in light material service, Romic will contact the generator to determine whether the container has been verified to operate with no detectable emissions or has been demonstrated in the preceding twelve months to be vapor-tight. If Romic is unable to determine that the container meets either of these standards, the waste it contains will be processed or repackaged as soon as possible after acceptance analysis and review is complete, but within five days of acceptance.

D1.1.5.3 Container Level 1 Standards

40 CFR 264.1086(c)

Containers subject to Subpart CC and less than 0.46 m^3 in capacity and Subpart CC containers 0.46 m^3 or greater not in light material service are managed under the Container Level 1 standards. Containers will have their covers and closures installed at all times the containers are in storage, except when it is necessary to add or remove waste. A container will not remain open for greater than fifteen minutes between batches, when adding material to or removing material from the container in batches. Containers may also be opened to allow for visual inspection of their contents, but will promptly be reclosed after such inspection is completed.

D1.1.5.4 Container Level 2 Standards

40 CFR 264.1086(d)

Containers subject to Subpart CC, 0.46 m^3 or greater in capacity, and determined to be in light material service, are subject to Container Level 2 standards. Containers will have their covers and closures installed at all times the containers are in storage, except when it is necessary to add or remove waste. A container will not remain open for greater than fifteen minutes between batches, when adding material to or removing material from the container in batches. Containers may also be opened to allow for visual inspection of their contents, but will promptly be reclosed after such inspection is completed. If waste is transferred into a container using Level 2 controls, the transfer will occur using a submerged fill-pipe or bottom-fill fitting.

D1.1.6 Closure

At closure, all hazardous waste stored in Building 1 will be shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D1.2 Building 2

D1.2.1 Containers with Free Liquids

40 CFR 270.15; 264.175(a), (b)

Romic stores containers, including containers with free liquids, in Building 2. Secondary containment is provided that meets the requirements of 40 CFR 264.175(b) (see Section D1.2.4 below), including

sufficient secondary containment capacity for the case where every container in storage contains 100% free liquids.

D1.2.2 Description of Containers

40 CFR 270.14(b)(1); 264.171, 172

Building 2 can accommodate a maximum of 55,000 gallons of containerized waste. This may be comprised of:

- 1,000 55-gallon drums,
- 157 350-gallon totes, or
- A combination of drums, totes, and other containers of various capacities (e.g., 1-5 gallon pails, 16-30 gallon drums, 85-gallon salvage drums, cubic yard tri-walls, cylinders, canisters, and off spec/discarded material in original packaging).

Figure D-4 depicts the storage arrangement for Building 2 based on the case where 1,000 55-gallon drums are in storage. Other storage/stacking configurations may be exercised, as long as a minimum 24-inch aisle space between any double row of drums (two abreast), single row of totes or tri-wall boxes, or the equivalent is maintained.

Because hazardous wastes are generally regulated as hazardous materials under U.S. Department of Transportation regulations, they are subject to packaging requirements in Title 49 of the Code of Federal Regulations. These requirements provide standards for the types of containers that may be used to transport hazardous materials and thus hazardous wastes. Containers received at Romic will generally be DOT-compliant. Hazardous wastes arriving at the facility in other than DOT-compliant containers will be processed or repackaged expeditiously.

Containers may be reused for repackaging or consolidation of waste if the container and its closures are in good condition. Acceptable condition is verified by inspecting the container for presence of severe rusting, apparent structural defects such as cracks or severe dents, or evidence of leaks, which disqualify containers from being reused.

The waste types to be managed in Building 2 include any waste identified on the Part A application. The storage area of Building 2 is separated into ten separate bays, each providing its own secondary containment. These bays will be used to segregate wastes according to hazard class, and may include incompatible wastes. Acids and bases are stored in the east side bays, while other wastes such as oxidizers, flammables, and other hazard classes are stored in bays on the west side. Generally, only compatible wastes will be stored in a single bay. If it becomes necessary to store incompatible wastes within a bay, spill containment pallets will be used, unless the waste is lab packed in its own secondary containment, to maintain physical segregation between incompatibles.

D1.2.3 Container Management Practices

40 CFR 270.14(a); 264.173

Containers are inspected prior to unloading for signs of leakage and for proper closure of lids and bungs. If there are no signs of leakage or loose fittings, the containers of waste are unloaded from the transport vehicles by facility employees, typically using a forklift with a drum handling attachment. Containers that show signs of leaking will be overpacked or contained by other means prior to unloading. Other containers such as tote bins, tri-wall boxes, or supersacks will be unloaded using the appropriate forklift attachment. Containers are staged under the canopy or in Building 1 sampling area to await verification and the assignment of a waste tracking number. Containers may remain in the canopy area up to 10 days of receipt, and in Building 2 up to one year of the acceptance date on the tracking label. Typically, containers are removed from the canopy area, placed in Building 1 sampling area and assigned a tracking label within one working day of unloading. Once the material is sampled and a tracking label is assigned, the container is then moved to the designated storage bay within Building 2.

Romic's container tracking system is based on the assignment of a unique tracking number for each container. The tracking numbers are assigned by a computer program that cross references the unique tracking number with the profile number, the inbound manifest number and line item, the outbound manifest number and line item, any consolidation tracking numbers, if applicable, and the disposition of the material. The DOT hazard class and disposition of the material determines its storage location within Building 2, where the storage bays are arranged according to hazard class and disposition. The tracking labels applied to containers upon arrival indicate the unique tracking number, the inbound manifest number and line item, the date of acceptance and a bar code to facilitate inventory.

The condition of drums and containers is first assessed when they are off-loaded, and then they are reinspected weekly during the routine inspections of the storage areas as described in Section F2.1, Inspection Requirements. Inspection of container storage areas is as indicated on Table F-1, Inspection Schedule. Inspection results are recorded as indicated on the Romic Weekly Inspection Form in Appendix F-1. Any containers showing evidence of leakage, corrosion or damage will be either placed in overpack drums, processed immediately, or the waste will be transferred into a container in acceptable condition as described in Section G7.3.1, Leaking Containers.

Containers of hazardous wastes may be opened to take a sample, for waste acceptance, characterization, or other purposes, to repackage or transfer waste into other containers, or to add waste from other containers or tanks. Also, containers may occasionally require venting to relieve internal pressure. Otherwise, containers will be maintained closed, with all closure devices in place and secure.

Romic receives wastes packaged by generators in DOT packaging if the waste qualifies as a DOT hazardous material. All hazardous waste is subject to DOT regulations when shipped. The DOT proper shipping name, including the packing group, as well as the type of shipping container, is identified on the waste profile and must be approved by Romic prior to the first shipment of waste to Romic. DOT regulations offer a variety of compatible containers and packaging options for hazardous materials. (See 49 CFR 172.101 and Part 173) Romic accepts wastes in all forms of DOT approved packaging appropriate to the waste material. Section C4 discusses profiles and incoming waste acceptance. 55 gallon steel drums are the predominant containers received by Romic, followed by 55 gallon plastic drums, triwall boxes, supersacks, and other size steel and plastic drums. Additionally, cylinders, canisters, and off spec/discarded material in original packaging are also received.

Incompatible wastes, or wastes that are incompatible with other materials must not be placed in the same container with those materials, or into an unwashed container that previously held an incompatible waste or material. Prior to repacking or combining a waste, the profiles and analyses of the wastes to be combined must be checked to verify that the wastes are compatible. See Sections C4.5.1.3, C5.3.1 and C7.3 for discussion of profiles, fingerprint analyses (verification), and incompatible wastes.

Incompatible wastes within Building 2 are separated by concrete-walled secondary containment bays, spill containment pallets or lab packs (where the outer container provides secondary containment), or by distance in accordance with DOT requirements. DOT separation distances vary with the DOT hazard class of the material and its packaging.

Section F5, Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes discusses storage of incompatible materials. In Building 2, reactive (D003) and flammable (D001) wastes cannot be stored within 50 ft. of the property line as discussed below. Containers are stored in Building 2 based on compatibility by DOT hazard class and disposition.

Generally, flammable/combustible materials are stored with other flammable materials in Building 2 west side bays destined for fuels, fuel blending, solid fuels, etc., and are separate from materials of other incompatible hazard classes. Most of the corrosives will be stored in designated bays on the east side of Building 2. Corrosives in Building 2 are stored with other like corrosives (acids with other acids, bases with other bases) in separate bays. Universal wastes (batteries, light tubes, mercury containing materials) may be stored with other similar universal wastes. Most of the reactive wastes will be stored in designated bays on the west side of Building 2.

Romic facility personnel are trained in the proper handling of drums and containers. Romic makes use of forklifts, hand trucks (drum dollies), and pallet jacks to move containers and pallets bearing containers, and/or move containers by hand. Forklift drum-handling attachments are designed to safely transport two drums at a time without creating unnecessary stress or strain on the drums. This handling method guards against drum ruptures and leaks. Tote bins, tri-wall boxes, or supersacks will be picked up with forks on a forklift. Supersacks sometimes arrive at the facility on pallets. To handle these loads, the forklift operator

will carefully lift the pallet making sure that the forks are below the supersack. Supersacks may also be handled by the integral straps provided on such containers.

Typically, 55-gallon drums are stacked in rows of two, two drums high in a pyramid type arrangement, where the top layer of drums is offset by half a drum diameter relative to the lower layer. This type of stacking provides added stability. A minimum aisle space of 24 inches is maintained between rows. This arrangement allows for the movement of emergency and fire equipment as well as providing access to each drum in the facility for inspection.

Tri-wall boxes and tote bins may also be stacked no more than two-high, provided the arrangement is stable. Containers that are smaller than 55-gallon drums may be stacked in such a configuration that the height does not exceed the height of two totes/tri-wall boxes. Typically, containers smaller than 55 gallon drums are stacked on top of 55 gallon drums in a manner which allows clear visibility of each tracking label, and complies with the height restrictions. Lab packs and other pails of waste materials may be stacked up to three pails high on pallets in a configuration that allows clear visibility of each tracking label.

In accordance with DOT regulations under Title 49 of the Code of Federal Regulations, intermediate bulk containers (IBC) are rigid or flexible portable packaging that may have a capacity of 119 gallons to 793 gallons. Typically Romic receives IBCs with a capacity of about 350 gallons. Such containers must meet the standards specified in Section 178 of 49 CFR. This includes, per 49 CFR 178.703(a)(1)(vi), the stacking test load (in kilograms) marked on the IBC. Romic will not double stack IBCs unless the stacking test load rating of the bottom IBC is at least 25 percent greater than (i.e., 1.25 times) the weight of the upper container.

Containers containing ignitable or reactive wastes will not be stored within fifty feet of the property line. The 50-foot setback for Building 2 is depicted on Figure D-4. Romic will not store containers of ignitable or reactive wastes in the east bays, which are east of the 50-foot line. Additionally, Romic will not store flammable or reactive wastes in the southwest bay south of the 50-foot line.

D1.2.4 Secondary Containment System

40 CFR 270.15(a)(1)-(a)(5); 264.175(a), (b)(1)-(b)(5), (d)

Building 2 is a 3,340 square foot roofed structure, surrounded on three sides by building walls. The north end of the building opens to planned Tank Farm G. The building's containment slab is constructed of minimum 6" concrete with #5 rebar spaced 12" on center each way. Chemical resistant waterstops were installed at cold joints in the slab. A 30 mil polyethylene liner was installed under the entire building during construction. The slab is constructed free of cracks or gaps and is sufficiently impervious to contain leaks, spills and accumulated precipitation. Figure D-4 is a layout diagram of this building. Detailed construction drawings are provided in Section P.

Ten segregation bays are built into the building, separated by concrete walls. The floor of each segregation bay slopes toward its back wall; containment depth in each bay ranges from two inches at the

front of the bay to eight inches at the back wall (see Figure D-5). The containment area concrete is sufficiently impervious to contain leaks and spills until the spilled material can be removed. The concrete is currently coated with a high build chemical resistant epoxy coating to prevent staining of the underlying concrete from incidental spills; however there are areas that need to be repaired. Coating repair/ recoating will be done after permit issuance and prior to use of this unit for hazardous waste.

Building 2 is roofed and bermed to prevent incident and run-on precipitation. Therefore, capacity provisions do not need to be made for water from precipitation. The containment area has been determined to have sufficient secondary containment capacity to handle both of the following cases:

The containment area has sufficient capacity to contain 10% of the aggregate capacity of all containers in storage, or the largest container to be stored in the area, whichever is greater. The largest container stored in Building # 2 would be a 350-gallon intermediate bulk container (IBC, or "tote"). The aggregate capacity of containers in storage in Building # 2 is 55,000 gallons.

Any accumulated liquids in containment areas would be quickly observed. In addition to the formal, documented inspections conducted in accordance with Section F of this application, personnel who handle drums in the storage areas conduct informal inspections of the containers in storage each operating day.

The containment areas are operated so that liquids from leaks or spills are localized and removed as soon as possible, but within the required regulatory time frame. Accumulated liquids will drain towards the sumps or low points in each containment bay, although in many cases small spills would be cleaned up before they can get to the low points. Most releases would be expected to be minor (less than one drum) and could be cleaned up with dry absorbent materials and/or a neutralizing agent depending on the nature of the released material. Large releases of hazardous waste would be handled as described in Section G.

Any storm water accumulations in the containment areas would be expected to be minimal, as the building is roofed. Any such water will first be visually inspected for evidence of contamination such as a sheen, odor, or discoloration. If any potential contamination is discovered, the source shall be investigated and the containment water will be either placed in a container and assigned an appropriate disposition code, or picked up by a vacuum tanker for transfer into an appropriate tank. The water will be pumped into an onsite storage tank for aqueous wastes. The water will be treated on-site in the Wastewater Treatment System or shipped off-site.

D1.2.5 Air Emission Standards

40 CFR 270.27(a)(2), 264.1086

Containers stored in this unit include those subject to controls under Subpart CC: those subject to Container Level 1 controls, and those subject to Container Level 2 controls. Romic will not stabilize in containers hazardous wastes containing 500 ppmw or more of volatile organic compounds, and thus will not require Container Level 3 controls. There is no air emission control equipment associated with the

storage of containers in Building 2. Containers are expected to remain closed while in storage, except for when they are sampled or consolidated, if applicable.

Containers not subject to controls under Subpart CC are those:

1. With a design capacity less than or equal to 0.1 m^3 (approximately 26 gallons), or

2. Managing hazardous waste with less than 500 ppmw volatile organic compounds (VOC).

Containers less than 26 gallons in capacity can be identified by visual observation of their small size.

To determine if waste contains less than 500 ppmw VOC, Romic will generally rely on information supplied by waste generators during the profiling process in making Subpart CC waste determinations for incoming wastes. Profiling and the pre-acceptance process are discussed in Section C4. Section C4.2 discusses the pre-waste acceptance sampling requirement where the generator provides a representative waste sample for Romic to analyze, and must certify on the profile that the sample submitted is representative of the waste stream. Incoming wastes are sampled and analyzed by Romic to verify that the waste matches the profile , as discussed in Sections C4 and C5. If Romic needs to evaluate a waste to determine if it contains less than 500 ppm of VOC, SW 846 method 8260 is used.

Romic will generally base Subpart CC waste determinations for Romic-generated waste on process knowledge. If there is any uncertainty regarding a Subpart CC waste determination, Romic will perform a waste determination in accordance with 40 CFR 264.1083.

Romic inspects all incoming containerized hazardous wastes as follows:

- Incoming containers with a capacity between 0.1 m^3 (26 gallons) and 0.46 m^3 (121 gallons) are inspected within 24 hours of acceptance into the facility, unless the waste is processed or repackaged within that time frame. The inspection and any necessary repairs will be conducted in accordance with Section D1.2.5.1 below.

- Incoming containers with a capacity of 0.46 m^3 or greater are inspected within 24 hours of acceptance into the facility, unless the waste is processed or repackaged within that time frame. The inspection and any necessary repairs will be conducted in accordance with Section D1.2.5.2 below.

D1.2.5.1 Containers < 0.46 m^3 Capacity

40 CFR 264.1086(c)

Containers with a capacity of less than 0.46 m^3, or approximately 121 gallons, will be inspected to ensure that all covers and closure devices are secured, and that there are no visible defects that would allow excess air emissions. Correction of any defects noted will be attempted within 24 hours of detection. Correction attempts will generally consist of securing a closure device (e.g., bung or drum ring and bolt).

If correction attempts are not successful or feasible, the waste will processed (e.g., pumped into a tank) or repackaged into a sound (DOT-compliant) container within five days of defect detection.

D1.2.5.2 Containers ≥ 0.46 m3 Capacity

40 CFR 264.1086(c) and (d)

Containers with a capacity of 0.46 m^3 or greater will be inspected. Generally, the containers arriving at Romic meet U.S. Department of Transportation (DOT) regulations. Containers meeting DOT requirements will be inspected to ensure that all covers and closure devices are secured, and that there are no visible defects that would allow excess air emissions. Correction of any defects noted will be attempted within 24 hours of detection. Correction attempts will generally consist of securing a closure device (e.g., manway hatch). If correction attempts are not successful or feasible, the waste will be processed (e.g., pumped into a tank) or repackaged into a sound (DOT-compliant) container within five days of defect detection.

Romic receives wastes packaged by generators in DOT packaging if the waste qualifies as a DOT hazardous material. All hazardous waste is subject to DOT regulations when shipped. The DOT proper shipping name, including the packing group, as well as the type of shipping container, is identified on the waste profile and must be approved by Romic prior to the first shipment of waste to Romic. It is unlikely that light liquid organic materials would be approved for shipment to Romic in a non-DOT approved container.

Romic will generally rely on information supplied by waste generators during the profiling process in making Subpart CC waste determinations for incoming wastes. Profiling and the pre-acceptance process are discussed in Section C4. Section C4.2 discusses the pre-waste acceptance sampling requirement where the generator provides a representative waste sample for Romic to analyze, and must certify on the profile that the sample submitted is representative of the waste stream. Incoming wastes are sampled and analyzed by Romic to verify that the waste matches the profile , as discussed in Sections C4 and C5.

If a container with a capacity of 0.46 m^3 or greater is accepted at the facility and is found not to meet DOT regulations, the profile will be reviewed to determine the type of container approved for that waste, and if the container is in light material service. Light material service is where the total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20°C is equal to or greater than 20% by weight. The profile may explicitly describe a waste stream as light material, or it may require interpretation on the part of facility management. Facility management will use knowledge of the characteristics of the constituents on the profile, reference materials, or testing to determine whether a waste stream should be classified as light material.

If the container is not in light material service, it will be inspected to ensure that it has a cover and closure devices that form a continuous barrier over the container openings. Correction of any defects noted will be attempted within 24 hours of detection. If attempts at correction are not successful or feasible, the waste will be processed or repackaged into sound (DOT-compliant) containers within five days of defect detection.

If the (non-DOT) container is found to be in light material service, Romic will contact the generator to determine whether the container has been verified to operate with no detectable emissions or has been demonstrated in the preceding twelve months to be vapor-tight. If Romic is unable to determine that the container meets either of these standards, the waste it contains will be processed or repackaged as soon as possible after acceptance analysis and review is complete, but within five days of acceptance.

D1.2.5.3 Container Level 1 Standards

40 CFR 264.1086(c)

Containers subject to Subpart CC and less than 0.46 m^3 in capacity and Subpart CC containers 0.46 m^3 or greater not in light material service are managed under the Container Level 1 standards. Containers will have their covers and closures installed at all times the containers are in storage, except when it is necessary to add or remove waste. A container will not remain open for greater than fifteen minutes between batches, when adding material to or removing material from the container in batches. Containers may also be opened to allow for visual inspection of their contents, but will promptly be reclosed after such inspection is completed.

D1.2.5.4 Container Level 2 Standards

40 CFR 264.1086(d)

Containers subject to Subpart CC, 0.46 m^3 or greater in capacity, and determined to be in light material service, are subject to Container Level 2 standards. Containers will have their covers and closures installed at all times the containers are in storage, except when it is necessary to add or remove waste. A container will not remain open for greater than fifteen minutes between batches, when adding material to or removing material from the container in batches. Containers may also be opened to allow for visual inspection of their contents, but will promptly be reclosed after such inspection is completed. If waste is transferred into a container using Level 2 controls, the transfer will occur using a submerged fill-pipe or bottom-fill fitting.

D1.2.6 Closure

At closure, all hazardous waste stored in Building 2 will be shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D1.3 Other Units

This section describes the container management activities that do not require permitting. These activities occur within 90-day, satellite accumulation, and 10-day transfer areas. Table D-2 lists these areas, and summarizes their regulatory status.

D1.3.1 Canopy Area

The Canopy Area is used for the staging and preparation of both inbound and outbound loads. Inbound loads are staged in this area upon unloading. They are inspected and labeled with Romic's internal tracking label. Outbound loads are staged in this area in preparation for loading and transport off-site. The canopy area is a 10-day transfer area.

D1.3.2 East Bay Processing Area

The East Bay Processing Area is used for processing smaller containers of waste, for example, lab packs. Waste in smaller containers is consolidated or compacted into larger containers for off-site transfer or on-site processing. A compactor in the east bay is used to tightly pack materials into drums. Containers awaiting processing may be staged in this area prior to consolidation, along with containers that are being consolidated, or full consolidation containers. Full consolidation containers may be stored in this area up to 90 days before they must be moved to permitted storage.

D1.3.3 West Bay Processing Area

The West Bay Processing Area is used for drum crushing, container emptying ("mucking"), and poly drum cutting. The aerosol depressurization unit (see Section E) is also in this area. Containers awaiting processing may be staged in this area prior to mucking or consolidation, along with containers that are being consolidated, or full consolidation containers. Full consolidation containers may be stored in this area up to 90 days before they must be moved to permitted storage.

D1.3.4 Railcars

Rail cars are used to transport Romic-generated wastes to off-site authorized facilities. Rail cars are managed as 90-day generator containers. A rail car being loaded will be shipped off-site no later than 90 days from the time the first drum or load has been added to it. In addition, liquid waste may be received in railcars.

The railcars are located within the railspur area. This area is identified in the facility layout in Figure D-1.

D1.3.5 Rail Loading & Unloading Area

The rail loading & unloading area is a contained area adjacent to the rail spur. It is used to load roll-off containers with Romic-generated wastes for off-site shipment, equipment decontamination, and some repackaging activities. Although free liquids may be managed in railroad tanker car units for off-site shipment, free liquids are not managed in roll-off units.

D1.3.6 Tanker Washout

Tanker washout activities, essentially a completion of an unloading process, may occur at various locations within the facility.

D2 Tanks

D2.1 General

This section describes the basic physical design of the tanks used to store and treat waste at the facility. In many cases the different types of tanks are used to handle more than one type of waste. However, each type of tank design may be better suited to handle certain types of waste as described below.

The discussions below describe the tanks used for storing and/or treating hazardous wastes. Products and raw materials may also be stored in these tanks, tanks that resemble these hazardous waste tanks, or tanks of different design types. Table D-3, Storage Tanks identifies all hazardous waste storage tanks by tank farm, tank capacity, material of construction, and intended service.

As shown in Table D-3, tanks are located within identified containment areas. These areas are designated:

Tank Farm A

Tank Farm B

Tank Farm C

Tank Farm D

Tank Farm E

Tank Farm F

The tank farms are depicted on Figure D-1, Facility Layout. A description of the types of wastes managed by the tank units is provided as Table D-4. Each area contains one or more hazardous waste tanks or treatment vessels. Note that unregulated tanks may also be within the same tank farm as hazardous waste storage tanks or process vessels (i.e., regulated units). The following paragraphs describe the common features of the tank farms.

Cone Bottom Tanks

Cone bottom carbon steel tanks receive the majority of wastes handled by the facility. These tanks are designed and operated to allow the primary settling and separation of sludge in the tank. This separation process is accomplished through three possible discharge points from the tank. Settled sludge is discharged from the bottom valve of the tank. Depending upon the amount of sludge in the tank, the waste will be transferred to the process area via one of two lines that originate from the bottom of the cone or from the shell of tank just above the cone of the tank.

Sloped Bottom Tanks

Sloped bottom tanks are used by the facility primarily for storage. The tanks may receive wastewater, solvents, oils, and fuel blending waste. The tanks may also be used as a receiving tank for incoming waste

streams. The sloped bottom design facilitates complete removal of waste from the tanks. The tank foundation is a raised concrete pedestal, with a tank drain valve located at the lowest point.

Dished Tanks

Dish bottom tanks are used by the facility in two main process areas. One is the fuel blending operation and the other is for hazardous waste treatment equipment associated with distillation operations (fractionation, vacuum pot, or thin film equipment). These tanks are elevated on legs and may be equipped with agitators to enhance the mixing process for wastes that are blended and sent off-site as alternative fuels.

Flat Bottom Tanks

Flat bottom tanks are used by the facility for industrial wastewater treatment, solvents, oils, and fuel blending waste. The tanks may also be used as a receiving tank for incoming waste streams. The disadvantage of flat bottom tanks is difficulty in completely draining the tanks.

Plastic Tanks

Plastic tanks made from cross-linked high-density polyethylene (HDPE) are flat-bottomed or coned tanks. HDPE tanks are very resistant to attack from many chemicals such as concentrated mineral acids stored at ambient temperatures. Corrosive storage tanks are constructed of high-density cross-linked polyethylene.

Lined Tanks

Tanks 308 and 309 are rubber lined steel tanks, which will be used in the corrosive treatment process (this is a planned process and types of tanks could be different, however tanks used will be compatible with material being processed). These tanks are used as reactors to neutralize acids and adjust pH to allow metals precipitation.

Unregulated Tanks and Process Vessels

There are a number of tanks located on-site that are not subject to tank standards under RCRA because they are not used for managing hazardous waste. These include tanks storing product (e.g., recovered solvent or ethylene glycol prior to sale), raw materials (e.g., boiler feed water), or non-hazardous materials (e.g., cooling tower water). These tanks are identified in Table D-3, Storage Tanks.

The facility may add, remove, or replace at will, tanks that are not used for regulated waste. Such changes may be made without amending this permit. However, such modifications will be made in compliance with other applicable requirements such as local building and fire codes and hazardous material management requirements.

Newly Constructed Tanks

Newly Authorized Tanks are proposed tanks that are included in this permit application or in future permit modification requests. Newly constructed tanks must follow the procedures described below.

Assessment and Certification Procedures

Newly constructed tanks must have a written assessment from an independent, qualified registered professional engineer attesting that tanks have sufficient structural integrity and are acceptable for storing and treating hazardous waste. The assessment is conducted prior to installation to demonstrate that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed, that the tanks have sufficient structural strength and compatibility with the waste(s), and that corrosion protection is used where applicable to ensure that tanks will not collapse, rupture, or fail. The assessment also includes design drawings, the design standard to which tank systems are constructed, and a discussion of the hazardous characteristics of wastes to be stored or treated. The time period for which the certification is valid must also be specified, i.e., the estimated remaining service life of the tank.

The structural integrity assessment for new tanks will demonstrate that tank foundations will maintain the load of a full tank. The assessment also verifies that ancillary equipment will be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

These engineering assessments will be provided to the USEPA.

Planned tanks are included in Table D-3, Storage Tanks.

Once the tank designs are authorized, they may be installed. As described below, a post-installation certification is also required.

New tanks must be installed using proper handling procedures to prevent damage to the tank system during installation. Before being placed in use, an independent professional engineer or qualified installation inspector inspects the tank system for:

1. breaks, punctures, scrapes, corrosion, and any other structural damage,
2. inadequate construction/installation, and
3. tightness prior to being placed in use.

Tanks will not be placed in use if leaks are found (i.e., fails the tightness test). Any discrepancies noted during the pre-installation inspection will be corrected before tanks are placed in service. An independent professional engineer will determine the type and degree of corrosion protection required for tank systems, based on exposure conditions. The installation of any corrosion protection system that is field fabricated will be supervised by a professional engineer to ensure proper installation. Written statements by those supervising the installation will be kept on file at the facility. The written statements certify that the tank system was properly installed and that repairs, where needed, were performed.

Tank Transfers

Romic manually transfers liquids from tank to tank, tank to process, process to tank, or to and from tanks and tank trucks. In conducting such transfers, the operator will connect hoses to the appropriate pipe connections in the troughs, and/or will assure that the valves on manifolds are in the proper position to transfer material to the intended location. The operator will double check connections before initiating transfer operations. The operator will also check the receiving tank or tank truck liquid level to determine the available capacity. If the receiving vessel cannot take the full volume of the originating vessel, the operator shall monitor the transfer as needed to prevent over-filling of the receiving vessel. After starting the pump, the operator will verify that the waste or other material is being added to the proper tank. The operator will inspect the transfer hoses and connections for leaks. When the target level on the receiving vessel is reached, the transfer pump will be turned off immediately. A valve at the pump will be closed to prevent siphoning of the tank contents.

Cone bottom carbon steel tanks receive the majority of wastes handled by the Romic facility. These tanks are designed and operated to allow the primary settling and separation of sludge in the tank. This separation process is accomplished through three possible discharge points from the tank. Settled sludges are discharged out the bottom gate valve of the tanks. Depending upon the amount of sludge in the tank, the waste will be transferred to the process area via one of the process lines that originate from the bottom of the cone or from the shell of tank just above the cone of the tank.

Pipe sizes are designed based upon pumping rates, specific gravity of the material to be transferred, viscosity, temperature, and line friction losses (pressure drop). All piping is pressure-tested at 125% of the maximum operating pressure, using water, prior to being placed in service.

The feed systems to the tanks use welded flanges, welded joints, threaded flanges and threaded joints. Galvanized, black iron or stainless steel pipes are used for solvent storage tank feed systems and PVC is used for corrosive waste feed systems. All piping runs are within the secondary containment system of the associated tank farm. Pipes connect to transfer stations where flexible hoses are manually connected to transfer from pipe to pipe or to/from tanker trucks. Transfer hoses connect to the pipes via cam lock connections. Each transfer station has a collection trough, which collects any drips and/or spills that may occur while connecting and disconnecting the hoses. The trough drains to a low point that is pumped through a pipe and valve arrangement to a waste storage tank. All transfer stations are located in the secondary containment systems of the hazardous waste tank farms.

Tank ancillary equipment primarily consists of piping systems, which are secondarily contained through the use of the tank farm containment basins, and double wall overhead piping in non-contained areas. The Romic facility utilizes portable air-driven and electrically-driven pumps or permanently installed air and electrically driven pumps to transfer liquids throughout the facility. Permanent pumps are located within secondary containment areas. The portable pumps are situated within a tank farm or process unit secondary containment system prior to transfer of material. Facility personnel monitor portable pumps while liquid transfers are conducted. If a portable pump leaks during material transfer, the operator will

cease the transfer operation. Pumps are inspected on either a daily or weekly basis as specified by Section F, Procedures to Prevent Hazards. Spilled material will be managed in accordance with the procedures specified in Section G, Contingency Plan.

Hazardous waste piping systems within the Romic Facility are primarily single wall and situated within secondary containment structures. There are no underground piping systems for transferring hazardous waste. There is limited double wall aboveground piping that connects some of the tank containment and process areas via overhead pipe racks. This flanged and/or welded pipe was installed inside an approximately four to six inch diameter PVC pipe that drains into the secondary containment structure on either end. Piping system elements are inspected on either a daily or weekly basis as specified by Section F, Procedures to Prevent Hazards.

D2.2 Tank Farms A and B

D2.2.1 Tank Systems Descriptions

40 CFR 270.14(b)(1); 270.16(b), (c), (d), (j); 264.194(b); 264.198; 264.199

The tanks in Tank Farms A and B are listed on Table D-3, Storage Tanks. Table D-3 indicates the capacity, configuration, material of construction, year of installation, intended waste service, and Subpart CC status for each hazardous waste storage tank. Individual tank drawings indicating the dimensions of each tank are located in Section P. Figure D-6 is a layout diagram of Tank Farms A and B.

Tank Farms A&B tanks are designated for organic solvents and wastewaters containing organic solvents. Some of these organic solvents may be ignitable wastes. Reactive and incompatible wastes are not stored in this area. Refer to Section C for information on how compatibility is determined. Hazardous waste tanks in tank farms A&B are more than 15 feet from public ways or a property line that can be built upon, are properly grounded, and are equipped with conservation vents, which act as pressure-vacuum relief to maintain safe internal operating pressures.

Tank feed is by manual connection of flexible hose(s) at the trough, and manual initiation of pump operation. There are no automated safety cut off, pressure control or bypass systems on any tanks in Tank Farms A&B. The tanks are operated at atmospheric pressure. Overfill prevention for the tanks in Tank Farms A and B is provided through a combination of manual level gauging and operator vigilance. The liquid level in a tank can be correlated to a volume available in the tank, and thus the amount of waste that can be transferred without overfilling can be determined. By dropping a measuring tape from a known point in the tank to the start of liquid level, the volume available for a transfer can be determined. An operator is assigned to monitor the transfer into a tank during a fill, and will manually stop waste transfer or call another operator to stop waste transfer if he must leave the area as the fill point is neared.

Hazardous waste tank 105, which may occasionally receive elevated temperature material, is vented through the plant closed-vent system to a control device (see Section M). In addition, it is equipped with a conservation vent, which acts as a pressure-vacuum relief, to maintain safe internal operating pressures.

Wastes are filtered as they are pumped from tanker trucks into cone bottom tanks to remove material that may cause blockage of the transfer lines and tanks. Fine particles passing through the filter may settle as sludge in the cone bottoms of the tanks. Sludges are removed from cone bottom tanks by manually pumping from the cone bottom connection into another tank or container. If the sludge cannot be pumped by normal means, a vacuum tanker may be used to draw a more powerful suction. If the vacuum unit cannot remove the sludge, samples will be taken to determine if the sludge can be dissolved in a solvent (such as NMP or other solvents available onsite), and the appropriate solvent will be added to the tank to dissolve the sludge. Sludge may also be agitated with an air wand, or heated by steam, if necessary.

At closure, all hazardous waste stored in Tank farms A&B will be treated onsite or shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the tanks, piping and containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D2.2.2 Tank Standards

40 CFR 270.16(a), (e), (f); 264.192(a)-(e)

The hazardous waste storage tanks in Tank Farms A and B were assessed by an independent, qualified, registered professional engineer. The certified assessment is included in Section P of this application.

D2.2.3 Containment and Detection of Releases

40 CFR 270.16(g), (h); 264.193

Tank Farms A and B provide secondary containment through an impermeable base of concrete with curbs surrounding the base. The containment slab is constructed of a 10" thick, minimum 3000 lb concrete with #5 rebar 12" on-center each way. The slab is monolithic, thus there are no cold joints. All hazardous waste storage areas are underlain by a 30 mil HDPE liner. The concrete is sealed with a chemical-resistant epoxy coating. Refer to Section P for design and details of Tank Farm A&B containment construction. The A&B containment areas are sloped to low points at blind sumps from which any spills or leaks draining away from the tanks may be manually pumped.

Tank Farms A and B are located outside under roofing with open sides; therefore exposure to rainfall is minimal. As discussed in Section B6.3, the maximum 25-year, 24-hour rainfall amount was determined to be about 3.12-inches. The area is equipped with an AFFF (aqueous film-forming foam) based fire suppression system. No tank ancillary equipment is located outside of the secondary containment structure.

Tank Farm A walls are a different height than Tank Farm B walls. The walls adjoin, and the space between them is caulked and sealed. The Tank Farm B wall, which is the higher of the two, has a channel that allows spillover from Tank Farm B to Tank Farm A. Thus, the total secondary containment capacity for Tank Farm B is calculated for these two tank farms as if they were a single unit. Tank Farm A cannot flow into Tank Farm B because its walls are lower than the channel in the Tank Farm B wall. The combined containment for Tank Farm B will have sufficient containment capacity to hold the contents of

the largest tank, or 15,300 gallons (Tank 112). Table D-5 summarizes the available and required secondary containment capacity for this tank farm unit.

Any accumulated liquids in a containment area would be quickly observed via the tank and containment area inspection procedures described in Section F and by the regular presence of facility operators in the vicinity. Tank system and containment basin inspections are described in Section F2.1, inspection schedules are found in Table F-1, and the inspection logs are found in Appendix F-1.

D2.2.4 Controls and Practices To Prevent Spills And Overflows

40 CFR 270.16(i); 264.194(a), (b); 264.195

Tank overfill prevention is described above, in Section D2.2.1. This is a manual operation, requiring an operator to measure the level in the receiving tank, connect the flexible hoses to the proper fittings, open/close valves, initiate the pump operation, and monitor the fill. There are no automated controls such as level sensing devices, high level alarms, automatic feed cutoff, bypass to a standby tank, etc.

These containment areas are operated so that liquids from leaks or spills are localized and removed as soon as possible but within required regulatory time limits. Any spilled liquids, precipitation, or other liquids will be removed within 24 hours, or sooner if necessary to prevent overflow of the containment system. To minimize the occurrence of leaks or spills, the tanks and transfer operations are inspected regularly per the inspection schedule in Section F. Most releases are expected to be minor and could be cleaned up with dry absorbent materials and/or other material depending on the nature of the release. Large releases of hazardous waste would be handled as described in the Contingency Plan, Section G of this application. It is expected that the hazardous waste materials released would be pumped to a tank in sound condition, that has available capacity, and, if not empty, contains a material of similar characteristics. The waste may be pumped directly or the material would be picked up by a vacuum tanker and then deposited into an appropriate tank.

Rainwater accumulations in the tank containment area will be visually inspected. If there are indications (e.g., a sheen) that the rain water has contacted waste material, the source will be investigated and corrective measures implemented as warranted. All storm water that accumulates in tank farm secondary containment areas, is transferred directly by pump or use of a vacuum tanker to a non-hazardous waste tank. Unless contaminated by significant waste materials, this is not a regulated activity and is included for general informational purposes.

D2.2.5 Air Emission Controls

40 CFR 270.27(a)(5), (a)(6); 264.1084

All of the hazardous waste tanks in Tank Farms A and B are eligible for Tank Level 1 controls with the possible exception of Tank 105 (see Table D-3 for rationale). Tank 105 is used as the bottoms tank for the thin film evaporator unit. When the thin film evaporator unit is running, material at elevated temperatures may enter Tank 105. Though it is unlikely that the material entering Tank 105 will have a vapor pressure of greater than 76.6 kPa, Romic is classifying this tank as subject to Tank Level 2 controls, and it is

vented through the plant closed-vent system to a control device. The closed-vent system and control device are described in Section M in this application.

All of the tanks in Tank Farms A and B are fixed roof tanks equipped with conservation vents. Under Subpart CC standards, these types of tanks are eligible for Tank Level 1 controls based upon their engineering design and associated pressure rating(s) (see Tables D-3, D-4, D-6, and Section P), and the type of materials processed within them. All of the tanks in Tank Farms A and B are less than 75 cubic meters in volume, allowing a maximum organic vapor pressure of 76.7 kPa; except for Tank 105, they are not heated; and they are not used in a waste stabilization process. The wastes to be stored in these tanks will never have an organic vapor pressure in excess of 71 kPa (again, with the possible occasional exception of Tank 105)(see Table D-6 for calculations); thus Level 1 controls are appropriate for these tanks. None of the Level 1 tanks are vented through the plant closed- vent system to a control device.

Tank Farm A&B tanks ancillary equipment consists of piping systems which are located within the containment basins. Some of these piping systems may be subject to Subpart BB air emission standards based on the type of hazardous waste managed in the tank system. These piping systems and their components have been properly identified in accordance with Subpart BB provisions. The piping systems that serve product tanks in Tank Farms A&B are not subject to Subpart BB air emission standards. The specific list of all Subpart BB-subject equipment (connectors, joints, etc.), location, unique identifiers, and most recent inspection are included in Appendix F-5.

D2.3 Tank Farm C

D2.3.1 Tank Systems Descriptions

40 CFR 270.14(b)(1); 270.16(b), (c), (d), (j); 264.194(b); 264.198; 264.199

The tanks in Tank Farm C are listed on Table D-3. Table D-3 indicates the capacity, configuration, material of construction, year of installation, intended waste service, and Subpart CC status for each hazardous waste storage tank. Individual drawings indicating dimensions and connections are located in Section P. Figure D-7 is a layout diagram of Tank Farm C.

Tank Farm C tanks are designated for organic solvents and wastewaters containing organic solvents. Some of these organic solvents may be ignitable wastes. Reactive and incompatible wastes are not stored in this area. Refer to Section C for information on how compatibility is determined. Hazardous waste tanks in tank farm C are more than 15 feet from public ways or a property line that can be built upon, are properly grounded, and are provided with conservation vents which provide pressure-vacuum relief.

Tank feed is by manual connection of flexible hose(s) at the trough, and manual initiation of pump operation. There are no automated safety cut off, pressure control or bypass systems on any tanks in Tank Farm C. The tanks are operated at atmospheric pressure. Overfill prevention for the tanks in Tank Farm C is provided through a combination of manual level gauging and operator vigilance. The liquid level in a tank can be correlated to a volume available in the tank and thus it can be determined what amount of waste can be transferred without overfilling. By dropping a measuring tape from a known point in the

tank to the start of liquid level, the volume available for a transfer can be determined.. An operator is assigned to monitor the transfer into a tank during a fill, and will manually stop waste transfer or call another operator to stop waste transfer if he must leave the area as the fill point is neared.

The hazardous waste tanks in Tank Farm C are all equipped with conservation vents which act as pressure-vacuum relief maintain safe internal operating pressures.

At closure, all hazardous waste stored in Tank Farm C will be treated onsite or shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the tanks, piping and containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D2.3.2 Tank Standards

40 CFR 270.16(a), (e), (f); 264.192(a)-(e)

The hazardous waste storage tanks in Tank Farm C were assessed by an independent, qualified, registered professional engineer. The certified assessment is included in Section P of this application.

D2.3.3 Containment and Detection of Releases

40 CFR 270.16(g), (h); 264.193

Tank Farm C provides secondary containment through an impermeable base of concrete with curbs surrounding the base. The containment slab is constructed of a 10" thick, minimum 3000 lb concrete with #5 rebar 12" on-center each way. The slab is monolithic, thus there are no cold joints. All hazardous waste storage areas are underlain by a 30 mil HDPE liner. The concrete is sealed with a chemical-resistant epoxy coating. Refer to Section P for design and details of tank farm C containment and construction. The tank farm C containment area is sloped to a low point at a blind sump from which any spills or leaks draining away from the tanks may be manually pumped.

Tank Farm C is located outside under roofing with open sides; therefore exposure to rainfall is minimal. As discussed in Section B6.3, the maximum 25-year, 24-hour rainfall amount was determined to be about 3.12-inches. The area is equipped with an AFFF (aqueous film-forming foam) based fire suppression system. No tank ancillary equipment is located outside of the secondary containment structure.

Tank Farm C has sufficient containment capacity to hold the capacity of the largest tank, or 15,150 gallons (Tank 113). Table D-5 summarizes the available and required secondary containment capacity for this tank farm unit.

Any accumulated liquids in a containment area would be quickly observed via the tank and containment area inspection procedures described in Section F and by the regular presence of facility operators in the vicinity. Tank system and containment basin inspections are described in Section F2.1, inspection schedules are found in Table F-1, and the inspection logs are found in Appendix F-1.

D2.3.4 Controls and Practices To Prevent Spills And Overflows

40 CFR 270.16(i); 264.194(a), (b); 264.195

Tank overfill prevention is described above, in Section D2.3.1. This is a manual operation, requiring an operator to measure the level in the receiving tank, connect the flexible hoses to the proper fittings, open/close valves, initiate the pump operation, and monitor the fill. There are no automated controls such as level sensing devices, high level alarms, automatic feed cutoff, bypass to a standby tank, etc.

This containment area is operated so that liquids from leaks or spills are localized and removed as soon as possible but within required regulatory time limits. Any spilled liquids, precipitation, or other liquids will be removed within 24 hours, or sooner if necessary to prevent overflow of the containment system. To minimize the occurrence of leaks or spills, the tanks and transfer operations are inspected regularly per the inspection schedule in Section F. Most releases are expected to be minor and could be cleaned up with dry absorbent materials and/or other material depending on the nature of the release. Large releases of hazardous waste would be handled as described in the applicable sections of the Contingency Plan in Section G. It is expected that the hazardous waste materials released would be pumped to a tank in sound condition, that has available capacity, and if not empty, it contains a material of similar characteristics. The waste may be pumped directly or the material would be picked up by a vacuum tanker and then deposited into an appropriate tank.

Rainwater accumulations in the tank containment area will be visually inspected. If there are indications (e.g., a sheen) that the rain water has contacted waste material, the source will be investigated and corrective measures implemented as warranted. All storm water that accumulates in tank farm secondary containment areas, is transferred directly by pump or use of a vacuum tanker to a non-hazardous waste tank. Unless contaminated by significant waste materials, this is not a regulated activity and is included for general informational purposes.

D2.3.5 Air Emission Controls

40 CFR 270.27(a)(5), (a)(6); 264.1084

All of the tanks in Tank Farm C are fixed roof tanks equipped with conservation vents. Under Subpart CC standards, these types of tanks are eligible for Tank Level 1 controls based upon their engineering design and associated pressure rating(s) (see Tables D-3, D-4, D-6, and Section P), and the type of materials processed within them. All of the tanks in Tank Farm C are less than 75 cubic meters in volume, allowing a maximum organic vapor pressure of 76.7 kPa; they are not heated; and they are not used in a waste stabilization process. The wastes to be stored in these tanks will never have an organic vapor pressure in excess of 71 kPa; thus, Level 1 controls are appropriate for these tanks. None of the hazardous waste storage tanks in Tank Farm C are vented through the plant closed-vent system to a control device.

Tank Farm C tanks ancillary equipment consists of piping systems which are located within the tank farm containment basin. Some of these piping systems may be subject to Subpart BB air emission standards based on the type of hazardous waste managed in the tank system. These piping systems and their components have been properly identified in accordance with Subpart BB provisions. The piping systems that serve product tanks in Tank Farm C are not subject to Subpart BB air emission standards. The specific list of all Subpart BB-subject equipment (connectors, joints, etc.), location, unique identifiers, and most recent inspection are included in Appendix F-5.

D2.4 Tank Farm D

Tank Farm D presently contains two tanks, Tank 132 and Tank 136, currently in corrosive liquid service. These tanks will be renumbered and moved to Tank Farms E&F when Tank Farm D is converted to fuel blending operations under the new permit. Tank 132 will become Tank 401 in Tank Farm E, and Tank 136 will become Tank 301 in Tank Farm F.

D2.4.1 Tank Systems Descriptions

40 CFR 270.14(b)(1); 270.16(b), (c), (d), (j); 264.194(b); 264.198; 264.199

The tanks planned under the new permit in Tank Farm D are listed on Table D-3. Table D-3 indicates the capacity, configuration, material of construction, planned year of installation, intended waste service, and Subpart CC status for each hazardous waste storage tank. Individual tank drawings indicating the dimensions of each tank are located in Section P. Figure D-8 is a layout diagram of Tank Farm D.

Tank Farm D tanks are designated for organic solvents which will be blended together as fuel products in accordance with customer specifications. Some of these organic solvents may be ignitable wastes. Reactive and incompatible wastes are not stored or blended in this area. Refer to Section C for information on how compatibility is determined. Hazardous waste tanks in tank farm D are more than 15 feet from public ways or a property line that can be built upon, are properly grounded, and are equipped with conservation vents which act as pressure-vacuum relief.

Tank feed is by manual connection of flexible hose(s) at the trough, and manual initiation of pump operation. There are no automated safety cut off, pressure control or bypass systems on any tanks in Tank Farm D. The tanks are operated at atmospheric pressure. Overfill prevention for the tanks in Tank Farm D will be provided through a combination of manual level gauging and operator vigilance. The liquid level in a tank can be correlated to a volume available in the tank, and thus the amount of waste that can be transferred without overfilling can be determined. By dropping a measuring tape from a known point in the tank to the start of liquid level, the volume available for a transfer can be determined. An operator is assigned to monitor the transfer into a tank during a fill, and will manually stop the waste transfer or call another operator to stop waste transfer if he must leave the area as the fill point is neared.

Tanks 108 and 109 will be fixed roof tanks equipped with conservation vents. Tanks 137 and 138 will be stirred fixed roof fuel blending tanks equipped with conservation vents, which act as pressure-vacuum relief vents, to maintain safe internal operating pressures.

At closure, all hazardous waste stored in Tank Farms D will be treated onsite or shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the tanks, piping and containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D2.4.2 New Tank Standards

40 CFR 270.16(a), (e), (f); 264.192(a)-(e)

The hazardous waste storage tanks in Tank Farm D will be assessed by an independent, qualified, registered professional engineer to attest that the tank system has sufficient structural integrity and is acceptable for storing and treating hazardous waste, as discussed in Section D2.1. Prior to placing the tanks in use, the tanks and ancillary equipment will be inspected by a professional engineer to check for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, and other structural damage or inadequate construction/installation. Tightness testing will be performed by filling each tank system with water and inspecting for leaks. Any deficiencies discovered during these inspections will be remedied prior to placing the tanks in use. The certified assessments for installation and tightness testing will be submitted to USEPA prior to putting these tanks in use. Schematics of these tanks are included in Section P of this application.

D2.4.3 Containment and Detection of Releases

40 CFR 270.16(g), (h); 264.193

Tank Farm D provides secondary containment through an impermeable base of concrete with dikes or curbs surrounding the base. The containment slab is constructed of 10" thick, minimum 3000 lb concrete with #5 rebar 12" on-center each way. The slab is monolithic, thus there are no cold joints. All hazardous waste storage areas are underlain by a 30 mil HDPE liner. The concrete is sealed with a chemical-resistant epoxy coating. Refer to Section P for design and details of Tank Farm D containment and construction. The Tank Farm D containment area is sloped to a low point at a blind sump from which any spills or leaks draining away from the tanks may be manually pumped.

Tank Farm D is located outside under roofing with open sides; therefore exposure to rainfall is minimal. As discussed in Section B6.3, the maximum 25-year, 24-hour rainfall amount was determined to be about 3.12-inches. The area is equipped with an AFFF (aqueous film-forming foam) based fire suppression system. No tank ancillary equipment is located outside of the secondary containment structure.

Tank Farm D will be combined with Tank Farm C by cutting a channel in the adjoining walls to provide sufficient containment capacity to hold the capacity of the largest tank, or 19,800 gallons (Tank 137 or 138). Through this channel, liquid can flow from Tank Farm D to Tank farm C if additional containment capacity is needed. The channel will be cut to provide the additional capacity when tanks 137 & 138 are installed. Table D-5 summarizes the available and required secondary containment capacity for the combined tank farm unit.

Any accumulated liquids in a containment area would be quickly observed via the tank and containment area inspection procedures described in Section F and by the regular presence of facility operators in the vicinity. Tank system and containment basin inspections are described in Section F2.1, inspection schedules are found in Table F-1, and the inspection logs are found in Appendix F-1.

D2.4.4 Controls and Practices to Prevent Spills and Overflows

40 CFR 270.16(i); 264.194(a), (b); 264.195

Tank overfill prevention is described above, in Section D2.4.1. This is a manual operation, requiring an operator to measure the level in the receiving tank, connect the flexible hoses to the proper fittings, open/close valves, initiate the pump operation, and monitor the fill. There are no automated controls such as level sensing devices, high level alarms, automatic feed cutoff, bypass to a standby tank, etc.

This containment area is operated so that liquids from leaks or spills are localized and removed as soon as possible but within required regulatory time limits. Any spilled liquids, incident precipitation, or other liquids will be removed within 24 hours, or sooner if necessary to prevent overflow of the containment system. To minimize the occurrence of leaks or spills, the tanks and transfer operations are inspected regularly per the inspection schedule in Section F. Most releases are expected to be minor and could be cleaned up with dry absorbent materials and/or other material depending on the nature of the release. Large releases of hazardous waste would be handled as described in the applicable sections of the emergency response procedures. It is expected that the hazardous waste materials released would be pumped to a tank in sound condition, that has available capacity, and if not empty, it contains a material of similar characteristics. The waste may be pumped directly or the material would be picked up by a vacuum tanker and then deposited into an appropriate tank.

Rainwater accumulations in the tank containment area will be visually inspected. If there are indications (e.g., a sheen) that the rain water has contacted waste material, the source will be investigated and corrective measures implemented as warranted. All storm water that accumulates in tank farm secondary containment areas, is transferred directly by pump or use of a vacuum tanker to a non-hazardous waste tank. Unless contaminated by significant waste materials, this is not a regulated activity and is included for general informational purposes.

D2.4.5 Air Emission Controls

40 CFR 270.27(a)(5), (a)(6); 264.1084

Tanks 108 and 109 will be fixed roof tanks equipped with conservation vents. Tanks 137 and 138 will be fixed roof, fuel blending mix tanks. Under Subpart CC standards, these types of tanks are eligible for Tank Level 1 controls based upon their engineering design and associated pressure rating(s) (see Tables D-3, D-4, D-6, and Section P), and the type of materials processed within them. All of the tanks in Tank Farm D are less than 75 cubic meters in volume, allowing a maximum organic vapor pressure of 76.6 kPa; they are not heated; and they are not used in a waste stabilization process. The wastes to be stored in these tanks will never have an organic vapor pressure in excess of 71 kPa; thus, Level 1 controls

are appropriate for these tanks. None of these tanks will be vented through the plant closed-vent system to a control device.

Tank Farm D tanks ancillary equipment consists of piping systems which are located within the tank farm containment basin. These piping systems may be subject to Subpart BB air emission standards based on the type of hazardous waste managed in the tank system. These piping systems and their components will be properly identified in accordance with Subpart BB provisions. The specific list of all Subpart BB-subject equipment (connectors, joints, etc.), location, unique identifiers, and inspection format will be the same format as those included in Appendix F-5, and will be implemented when the fuel blending operation commences in Tank Farm D.

D2.5 Tank Farm E

D2.5.1 Tank Systems Descriptions

40 CFR 270.14(b)(1); 270.16(b), (c), (d), (j); 264.194(b); 264.198; 264.199

The tanks planned for Tank Farm E are listed in Table D-3. Table D-3 indicates the capacity, configuration, material of construction, planned year of installation, intended waste service, and Subpart CC status for each hazardous waste storage tank. Individual tank drawings indicating the dimensions of each tank are located in Section P. Figure D-9 is a layout diagram of Tank Farm E.

Tank Farm E tanks are designated for alkaline aqueous wastes of less than 500 ppmw of organics. Ignitable, reactive and incompatible wastes are not stored or blended in this area. Refer to Section C for information on how compatibility is determined. Hazardous waste tanks in tank farm E will be high density polyethylene tanks that are compatible with the profiled waste they contain. Because they contain less than 500 ppmw of organic materials, they are not equipped with conservation vents, and are not subject to Level 1 controls.

Tank feed is by manual connection of flexible hose(s) at the trough, and manual initiation of pump operation. There are no automated safety cut off, pressure control, or bypass systems on any tanks in Tank Farm E. The tanks are operated at atmospheric pressure. Overfill prevention for the tanks in Tank Farm E will be provided through a combination of manual level gauging and operator vigilance. The liquid level in a tank can be correlated to a volume available in the tank, and thus the amount of waste that can be transferred without overfilling can be determined. By dropping a measuring tape from a known point in the tank to the start of liquid level, the volume available for a transfer can be determined. An operator is assigned to monitor the transfer into a tank during a fill, and will manually stop waste transfer or call another operator to stop waste transfer if he must leave the area as the fill point is neared. Liquid levels in polyethylene tanks are easy to verify because the polyethylene is translucent and the liquid level can usually be seen from outside the tank.

At closure, all hazardous waste stored in Tank Farms E will be treated onsite or shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the tanks, piping and containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D2.5.2 New Tank Standards

40 CFR 270.16(a), (e), (f); 264.192(a)-(e)

The hazardous waste storage tanks in Tank Farm E will be assessed by an independent, qualified, registered professional engineer to attest that the tank system has sufficient structural integrity and is acceptable for storing and treating hazardous waste, as discussed in Section 2.1. Prior to placing the tanks in use, the tanks and ancillary equipment will be inspected by a professional engineer to check for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, and other structural damage or inadequate construction/installation. Tightness testing will be performed by filling each tank system with water and inspecting for leaks. Any deficiencies discovered during these inspections will be remedied prior to placing the tanks in use. The certified assessments for installation and tightness testing will be submitted to USEPA prior to putting these tanks in use. Schematics of these tanks are included in Section P of this application.

D2.5.3 Containment and Detection of Releases

40 CFR 270.16(g), (h); 264.193

Tank Farm E provides secondary containment through an impermeable base of concrete with curbs surrounding the base. The containment slab is constructed of 10" thick, minimum 3000 psi concrete with #5 rebar 12" on-center each way. The slab is monolithic, thus there are no cold joints. All hazardous waste storage areas are underlain by a 30 mil HDPE liner. The concrete basin is sealed with a chemical resistant epoxy coating. Refer to Section P for design and details of Tank Farm E containment construction. Tank Farm E containment is sloped to a low point at a blind sump from which any spills or leaks draining away from the tanks may be manually pumped.

Tank Farm E is located outside under roofing with open sides; therefore exposure to rainfall is minimal. As discussed in Section B6.3, the maximum 25-year, 24-hour rainfall amount was determined to be about 3.12-inches. The area is equipped with an AFFF (aqueous film-forming foam) based fire suppression system. No tank ancillary equipment will be located outside of the secondary containment structure.

Tank Farm E has sufficient containment capacity to hold the capacity of the largest tank, or 8,500 gallons (Tanks 411 through 413). Table D-5 summarizes the available and required secondary containment capacity for this tank farm unit.

Any accumulated liquids in a containment area would be quickly observed via the tank and containment area inspection procedures described in Section F and by the regular presence of facility operators in the vicinity. Tank system and containment basin inspections are described in Section F2.1, inspection schedules are found in Table F-1, and the inspection logs are found in Appendix F-1.

D2.5.4 Controls and Practices to Prevent Spills and Overflows

40 CFR 270.16(i); 264.194(a), (b); 264.195

Tank overfill prevention is described above, in Section D2.5.1. This is a manual operation, requiring an operator to measure the level in the receiving tank, connect the flexible hoses to the proper fittings, open/close valves, initiate the pump operation, and monitor the fill. There are no automated controls such as level sensing devices, high level alarms, automatic feed cutoff, bypass to a standby tank, etc.

This containment area will be operated so that liquids from leaks or spills are localized and removed as soon as possible but within required regulatory time limits. Any spilled liquids, incident precipitation, or other liquids will be removed within 24 hours, or sooner if necessary to prevent overflow of the containment system. To minimize the occurrence of leaks or spills, the tanks and transfer operations are inspected regularly per the inspection schedule in Section F. Most releases are expected to be minor and could be cleaned up with dry absorbent materials and/or other material depending on the nature of the release. Large releases of hazardous waste would be handled as described in the applicable sections of the emergency response procedures. It is expected that the hazardous waste materials released would be pumped to a tank in sound condition, that has available capacity, and if not empty, it contains a material of similar characteristics. The waste may be pumped directly or the material would be picked up by a vacuum tanker and then deposited into an appropriate tank.

Rainwater accumulations in the tank containment area will be visually inspected. If there are indications that the rain water contacted waste material, the source will be investigated and corrective measures implemented as warranted. All storm water that accumulates in tank farm secondary containment area will be transferred directly by pump or use of a vacuum tanker to a non-hazardous waste tank. Unless contaminated by significant waste materials, this is not a regulated activity and is included for general informational purposes.

D2.5.5 Air Emission Controls

40 CFR 270.27(a)(5), (a)(6); 264.1084

The tank systems in Tank Farm E will be used to store alkaline aqueous wastes with less than 500 ppmw volatile organics. Thus, they are not subject to Subpart BB or CC air emission standards controls. Through the profiling and waste acceptance procedures described in Section C, Romic will verify that the alkaline wastes transferred to Tank Farm E do not contain volatile organic material at or over 500 ppmv. Each waste profile that Romic receives has undergone a profile pre-acceptance analysis and approval prior to the first shipment of that waste to Romic. A verification analysis (determination) is performed each time the profiled waste arrives at the Romic facility to verify that it matches the profile. This information is retained in the facility operating log, and will be used for the initial waste determination prior to the first use of the tanks in Tank Farm E. Each waste that is subsequently added to the tanks is similarly determined upon arrival at Romic. Any instances where a volatile organic concentration of greater than or equal to 500 ppmv is put into a tank in Tank Farm E will be reported to the Regional Administrator as required by 264.1090(a).

D2.6 Tank Farm F

D2.6.1 Tank Systems Descriptions

40 CFR 270.14(b)(1); 270.16(b), (c), (d), (j); 264.194(b); 264.198; 264.199

The tanks planned for Tank Farm F are listed in Table D-3. Table D-3 indicates the capacity, configuration, material of construction, planned year of installation, intended waste service, and Subpart CC status for each hazardous waste storage tank. Individual tank drawings indicating the dimensions of each tank are located in Section P. Figure D-10 is a layout diagram of Tank Farm F.

Tank Farm F tanks are designated for acidic aqueous wastes of less than 500 ppmw of organics. Ignitable, reactive and incompatible wastes are not stored or blended in this area. Refer to Section C for information on how compatibility is determined. Hazardous waste tanks in Tank Farm F will be high density polyethylene tanks that are compatible with the profiled waste they contain. Because they do not contain organic materials, they are not equipped with conservation vents, and are not subject to Level 1 controls.

Tank feed is by manual connection of flexible hose(s) at the trough, and manual initiation of pump operation. There are no automated safety cut off, pressure control, or bypass systems on any tanks in Tank Farm F. The tanks are operated at atmospheric pressure. Overfill prevention for the tanks in Tank Farm F will be provided through a combination of manual level gauging and operator vigilance. The liquid level in a tank can be correlated to a volume available in the tank, and thus the amount of waste that can be transferred without overfilling can be determined. By dropping a measuring tape from a known point in the tank to the start of liquid level, the volume available for a transfer can be determined. An operator is assigned to monitor the transfer into a tank during a fill, and will manually stop waste transfer or call another operator to stop waste transfer if he must leave the area as the fill point is neared. Liquid levels in polyethylene tanks are easy to verify because the polyethylene is translucent and the liquid level can usually be seen from outside the tank.

At closure, all hazardous waste stored in Tank Farms F will be treated onsite or shipped offsite for treatment and/or disposal, and all hazardous waste residues will be removed from the tanks, piping and containment system. Section J provides the Closure Plan for the entire facility. Section J1.8.1 discusses inventory elimination, and Section J1.8.2 discusses decontamination procedures for closure purposes.

D2.6.2 New Tank Standards

40 CFR 270.16(a), (e), (f); 264.192(a)-(e)

The hazardous waste storage tanks in Tank Farm F will be assessed by an independent, qualified, registered professional engineer to attest that the tank system has sufficient structural integrity and is acceptable for storing and treating hazardous waste, as discussed in Section 2.1. Prior to placing the tanks in use, the tanks and ancillary equipment will be inspected by a professional engineer to check for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, and other structural damage or inadequate construction/installation. Tightness testing will be performed by filling each tank system with water and inspecting for leaks. Any deficiencies discovered during these inspections will be remedied

prior to placing the tanks in use. The certified assessments for installation and tightness testing will be submitted to USEPA prior to putting these tanks in use. Schematics of these tanks are included in Section P of this application.

D2.6.3 Containment and Detection of Releases

40 CFR 270.16(g), (h); 264.193

Tank Farm F provides secondary containment through an impermeable base of concrete with curbs surrounding the base. The containment slab is constructed of 10" thick, minimum 3,000 psi concrete with #5 rebar 12" on-center each way. The slab is monolithic, thus there are no cold joints. All hazardous waste storage areas are underlain by a 30 mil HDPE liner. The concrete basin is sealed with a chemical resistant epoxy coating. Refer to Section P for design and details of Tank Farm F containment construction. Tank Farm F containment is sloped to a low point at a blind sump from which any spills or leaks draining away from the tanks may be manually pumped.

Tank Farm F is located outside under roofing with open sides; therefore exposure to rainfall is minimal. As discussed in Section B6.3, the maximum 25-year, 24-hour rainfall amount was determined to be about 3.12-inches. The area is equipped with an AFFF (aqueous film-forming foam) based fire suppression system. No tank ancillary equipment will be located outside of the secondary containment structure.

Tank Farm F has sufficient containment capacity to hold the capacity of the largest tank, or 8,500 gallons (Tanks 311 through 313, 321-323). Table D-5 summarizes the available and required secondary containment capacity for this tank farm unit.

Any accumulated liquids in a containment area would be quickly observed via the tank and containment area inspection procedures described in Section F and by the regular presence of facility operators in the vicinity. Tank system and containment basin inspections are described in Section F2.1, inspection schedules are found in Table F-1, and the inspection logs are found in Appendix F-1.

D2.6.4 Controls and Practices to Prevent Spills and Overflows

40 CFR 270.16(i); 264.194(a), (b); 264.195

Tank overfill prevention is described above, in Section D2.6.1. This is a manual operation, requiring an operator to measure the level in the receiving tank, connect the flexible hoses to the proper fittings, open/close valves, initiate the pump operation, and monitor the fill. There are no automated controls such as level sensing devices, high level alarms, automatic feed cutoff, bypass to a standby tank, etc.

This containment area will be operated so that liquids from leaks or spills are localized and removed as soon as possible but within required regulatory time limits. Any spilled liquids, incident precipitation, or other liquids will be removed within 24 hours, or sooner if necessary to prevent overflow of the containment system. To minimize the occurrence of leaks or spills, the tanks and transfer operations are inspected regularly per the inspection schedule in Section F. Most releases are expected to be minor and could be cleaned up with dry absorbent materials and/or other material depending on the nature of the release. Large releases of hazardous waste would be handled as described in the applicable sections of the

emergency response procedures. It is expected that the hazardous waste materials released would be pumped to a tank in sound condition, that has available capacity, and if not empty, it contains a material of similar characteristics. The waste may be pumped directly or the material would be picked up by a vacuum tanker and then deposited into an appropriate tank.

Rainwater accumulations in the tank containment area will be visually inspected. If there are indications that the rain water contacted waste material, the source will be investigated and corrective measures implemented as warranted. All storm water that accumulates in tank farm secondary containment area will be transferred directly by pump or use of a vacuum tanker to a non-hazardous waste tank. Unless contaminated by significant waste materials, this is not a regulated activity and is included for general informational purposes.

D2.6.5 Air Emission Controls

40 CFR 270.27(a)(5), (a)(6); 264.1084

The tank systems in Tank Farm F will be used to store acidic aqueous wastes with less than 500 ppmw volatile organics. Thus, they are not subject to Subpart BB or CC air emission standards controls. Through the profiling and waste acceptance procedures described in Section C, Romic will verify that the alkaline wastes transferred to Tank Farm F do not contain volatile organic material at or over 500 ppmv. Each waste profile that Romic receives has undergone a profile pre-acceptance analysis and approval prior to the first shipment of that waste to Romic. A verification analysis (determination) is performed each time the profiled waste arrives at the Romic facility to verify that it matches the profile. This information is retained in the facility operating log, and will be used for the initial waste determination prior to the first use of the tanks in Tank Farm F. Each waste that is subsequently added to the tanks is similarly determined upon arrival at Romic. Any instances where a volatile organic concentration of greater than or equal to 500 ppmv is put into a tank in Tank Farm F will be reported to the Regional Administrator as required by 264.1090(a).

TABLES

TABLE 1
SECONDARY CONTAINMENT CALCULATIONS FOR CONTAINER STORAGE AREAS

STORAGE/PROCESS AREA [1,2]	Length (ft)	Width (ft)	Containment Area (ft^2)	Min Depth (in)	Max Depth (in)	# Drums on Floor	# Drums Stacked	Total Drums	Gallons Equivalent	Containment Required (gal) (10% of quantity stored)	Containment Required (ft^3) (7.48 gal/ft^3)	Gross Containment (ft^3)	Displacement from Drums (ft^3)	Net Available Containment (ft^3)
CONTAINER STORAGE BUILDING #1														
Rows 1-39	51	100	5100.0	8	8	510	432	942	51810			3400.0	1068.1	
Rows 40-51	84.83	39.67	1682.5	8	8	260	236	496	27280			1121.7	544.5	
Rows 52-62	84.83	60.33	5118.3	8	8	396	374	770	42350			3412.2	829.4	
						1166	1042	2208	121440	12144	1623.5	7933.9	2442.1	5491.8
CONTAINER STORAGE BUILDING #2 [3]														
Bay 1 - Rows 80-81	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 2 - Rows 82-83	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 3 - Rows 84-85	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 4 - Rows 86-87	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 5 - Rows 88-89	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 6 - Rows 90-91	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 7 - Rows 92-93	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 8 - Rows 94-95	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 9 - Rows 96-97	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
Bay 10 - Rows 98-99	26.833	14.17	380.1	2	8	52	48	100	5500			158.4	68.1	
						520	480	1000	55000	5500	735.3	1583.9	680.7	903.2

Notes:

1. Calculations assume maximum storage capacity assuming all container are 55-gallons drums (see Figure D-2). Various types of containers (e.g., tri-wall boxes, intermediate bulk containers, or "totes," 5-gallon cans) may be stored in these buildings.
2. Displacement from drums is the secondary containment space taken up by drums sitting in containment. Displacement calculated using formula: $pi*r^2*h$, where r is the radius of a drum (one foot), and h is the height of the berm.
3. Secondary containment capacity is deemed adequate if the Net Available Containment is greater than the Containment Required. Containment capacity for bays in Building 2 calculated by multiplying surface area of bay by average depth (i.e., 5").

TABLE D-2 NON-PERMIT CONTAINER UNITS

AREA/UNIT	ACTIVITY	CLASSIFICATION	RATIONALE/CONTROLS
Canopy Area	Unloading of incoming shipments	10-day	Inbound loads undergoing unloading, waste acceptance
	Preparation of outbound shipments	10-day	Outbound loads with Romic as generator
East Bay	Lab pack processing	90-day	Wastes consolidated with Romic as generator
West Bay	Drum crushing/waste compaction	90-day	Wastes consolidated with Romic as generator
	Container emptying	90-day	Wastes removed from containers and consolidated with Romic as generator
	Poly drum cutting	90-day	Generally RCRA-empty containers; Romic is generator
Rail Cars	Outbound shipment	90-day	Cars are loaded with hazardous waste generated by Romic, e.g., fuels destined for cement kilns. Rail cars are subject to and meet DOT standards.
Rail Loading & Unloading Area	Equipment decontamination	90-day	Hazardous waste constituents removed from equipment become Romic-generated hazardous wastes
	Solids consolidation	90-day	Roll-offs are loaded with hazardous waste generated by Romic, e.g., solids for treatment or disposal.
Various	Tanker washout	10-day	Not treatment; removal of waste from containers.

10-day activities are regulated as 40 CFR 263.12 operations
90-day activities are regulated as 40 CFR 262.34(a) operations

TABLE D-3 STORAGE TANKS

Tank Farm	Tank ID	Max. Capacity (gal)	Permit Capacity (gal)	Tank Type; Mat'l of Construction	Installation Year	Date of Assessment	Waste Types Handled	Subpart CC Level/Design Capacity, Maximum vapor pressure	Max VP
A	101	5,850	5,800	Cone bottom; Carbon steel	1991	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	102	5,850	5,800	Cone bottom; Carbon steel	1991	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	105	6,500	5,900	Agitated, dish bottom; carbon steel	1991	2/4/92	Organic/aqueous; Fuels; Still bottoms	Level 2; < 75 m^3, max vp < 76.6 kPa @ ambient, but heated material enters tank	
	201(1)								
	202(1)								
B	103	5,850	5,800	Cone bottom; Carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, Max vp < 76.6 kPa	71 kPa (2)
	104	5,850	5,800	Cone bottom; Carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, Max vp < 76.6 kPa	71 kPa (2)
	112	15,300	15,000	Dish bottom; Stainless steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	203(1)								
	204(1)								
C	121	6,700	6,500	Flat bottom; carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	122	6,700	6,500	Flat bottom; carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	123	6,700	6,500	Flat bottom; carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)

Notes:

(1) Unregulated tank.

(2) Of the materials managed at Romic Southwest, the substance with the highest vapor pressure that is managed in tanks is acetone, with a vapor pressure of 71 kPa at 46.1 °C. Mixtures of acetone and other substances will have a lower vapor pressure. All other materials stored in tanks at the facility have lower vapor pressures.

(3) Units to be constructed after permit issuance.

Abbreviations: n/a = not applicable; HDPE = High density polyethylene; VP = Vapor pressure

TABLE D-3 STORAGE TANKS

Tank Farm	Tank ID	Max. Capacity (gal)	Permit Capacity (gal)	Tank Type; Mat'l of Construction	Installation Year	Date of Assessment	Waste Types Handled	Subpart CC Level/Design Capacity, Maximum vapor pressure	Max VP
C	124	9,400	9,000	Flat bottom; carbon steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	113	15,150	15,000	Dish bottom; Stainless steel	1992	2/4/92	Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
D	108(3)	5,850	5,800	Cone bottom; Carbon steel	2005		Organic/aqueous	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
	109(3)	5,850	5,800	Cone bottom; Carbon steel	2005		Organic/aqueous	Level 1; < 75 m^3, max vp <76.6 kPa	71 kPa (2)
	137(3)	19,800	19,500	Dish bottom; carbon steel	2005		Fuels	Level 1; < 75 m^3, max vp < 76.6 kPa;	71 kPa (2)
	138(3)	19,800	19,500	Dish bottom; carbon steel	2005		Fuels	Level 1; < 75 m^3, max vp < 76.6 kPa	71 kPa (2)
E	401(3)	5,000	4,100	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a
	402(3)	5,000	4,100	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a
	403(3)	5,000	4,100	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a
	411(3)	8,500	8,500	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a
	412(3)	8,500	8,500	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a
E	413(3)	8,500	8,500	Sloped bottom; HDPE	2005		Alkaline waste	Not subject; < 500 ppmw organics	n/a

Notes:

(1) Unregulated tank.

(2) Of the materials managed at Romic Southwest, the substance with the highest vapor pressure that is managed in tanks is acetone, with a vapor pressure of 71 kPa at 46.1 °C. Mixtures of acetone and other substances will have a lower vapor pressure. All other materials stored in tanks at the facility have lower vapor pressures.

(3) Units to be constructed after permit issuance.

Abbreviations: n/a = not applicable; HDPE = High density polyethylene; VP = Vapor pressure

TABLE D-3 STORAGE TANKS

Tank Farm	Tank ID	Max. Capacity (gal)	Permit Capacity (gal)	Tank Type; Mat'l of Construction	Installation Year	Date of Assessment	Waste Types Handled	Subpart CC Level/Design Capacity, Maximum vapor pressure	Max VP
F	301(3)	5,000	4,100	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	302(3)	5,000	4,100	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	303(3)	5,000	4,100	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	311(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	312(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	313(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	321(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	322(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a
	323(3)	8,500	8,500	Sloped bottom; HDPE	2005		Acid waste	Not subject; < 500 ppmw organics	n/a

Notes:

(1) Unregulated tank.

(2) Of the materials managed at Romic Southwest, the substance with the highest vapor pressure that is managed in tanks is acetone, with a vapor pressure of 71 kPa at 46.1 °C. Mixtures of acetone and other substances will have a lower vapor pressure. All other materials stored in tanks at the facility have lower vapor pressures.

(3) Units to be constructed after permit issuance.

Abbreviations: n/a = not applicable; HDPE = High density polyethylene; VP = Vapor pressure

TABLE D-4 WASTE STREAM DESCRIPTIONS FOR TANK STORAGE

Waste Type	Characteristics	Typical Waste Codes
Acid waste	Corrosive, low pH	D002
Alkaline waste	Corrosive, high pH	D002
Aqueous waste	Moderate pH, water-based liquid	
Fuels	Organic liquids with fuel value (BTU/Heat content); generally moderate pH	D001, F001-F005
Organic/aqueous waste	Generally moderate pH/noncorrosive liquids with varying concentrations of water	D001, F001-F005
Still bottoms	Generally moderate pH/noncorrosive organic liquids with varying concentrations of water	F001-F005, D001

TABLE D-5 TANK FARM SECONDARY CONTAINMENT CALCULATIONS

Tank Farm	Length (ft)	Width (ft)	Wall Height (in)	Sump (ft^3)	Adjustments (ft^3)	Gross Containment (ft^3)	Displacement (ft^3)	Net Containment (ft^3)	Containment Required (ft^3)	
									Largest Tank	10% of Aggregate Volume
A & B Combined						2463		2451	2,005	356
A	23.67	38.67	14.00	2.25	-	1070	12	1058	789	234
B	24.25	38.67	18.00	2.25	15.75	1393	0	1393	2,005	356
C & D Combined						5478		4044	2,607	676
C	45.25	25.83	30.00	2.25	4.06	2921	717	2204	2,005	582
D	39.67	25.83	30.00	2.25	6.25	2558	717	1841	2,607	676
E	36.08	24.58	30.00	2.25	11.25	2,209	966	1,243	1,136	505
E w/wall raised	36.08	24.58	37.00	2.25	13.88	2,723	1,191	1,532	1,136	505
F	37.58	36.08	30.00	2.25	11.25	3,381	1555	1,826	1,136	846

NOTES:
Adjustments represent truncated (beveled) corners of containment areas, which reduce the gross containment available.
Tank Farm B does not meet 40 CFR 264.175(b)(3) capacity requirements on its own; it is combined with Tank Farm A by a channel cut into the wall. The resulting combined tank farm has sufficient capacity.
Tank Farm D does not meet 40 CFR 264.175(b)(3) capacity requirements to accommodate planned tanks 137 and 138; it will be combined with Tank Farm C at the time of installation of those tanks. The resulting combined tank farm will have sufficient capacity.

Table D-6

Vapor Pressure Calculations at 46.1 ^{o}C

T (^{o}C) 46.1
T (^{o}K) 319.25

Vapor Pressure estimation equation: $P=\exp[C1+(C2/T)+C3*\ln(T)+C4*T^{C5}]$ P in Pascals

Vapor Pressure Constants from Perry's

Chemical	C1	C2	C3	C4	C5	Vapor Pressure (Kpa)
Methanol	81.768	-6876	-8.7078	7.19E-06	2	47
Acetone	69.006	-5599.6	-7.0985	6.22E-06	2	71
Isopropanol	88.134	-8498.6	-9.0766	8.33E-18	6	10
MEK	72.698	-6143.6	-7.5779	5.65E-06	2	31
Ethyl Acetate	66.824	-6227.6	-6.41	1.79E-17	6	32
n-Propyl Acetate	115.16	-8433.9	-13.934	1.03E-05	2	13
Ethyl Benzene	88.09	-7688.3	-9.7708	5.88E-06	2	4
MIBK	153.23	-10055	-19.848	1.64E-05	2	8
Toluene	80.877	-6902.4	-8.7761	5.80E-06	2	10
n-Butyl Acetate	71.34	-7285.8	-6.9459	9.99E-18	6	5
Xylenes	90.356	-7948.7	-10.081	5.98E-06	2	3
Ethanol	74.475	-7164.3	-7.327	3.13E-06	2	24
Water	73.649	-7258.2	-7.3037	4.17E-06	2	10

Antoine's equation: $\log10(P)=A-(B/(T+C))$ P in bars

Chemical	A	B	C	A-(B/(T+C))	Vapor Pressure (Kpa)
Perchloroethylene	4.18056	1440.819	-49.171	-1.154246	7

Table D-6 demonstrates that a closed-vent control system to control organic emissions is not required under 40 CFR Part 265.1084. For tank design capacities less that 75 m3 closed-vent control systems are not needed if the maximum organic vapor pressure in the tank is less than 76.6 kilopascals (kPa). The calculations shown in Table D-6 give vapor pressures in kPa for pure chemical species at 46.1 oC (115 oF). 46.1 oC was chosen as the maximum ambient air temperature for Chandler, Arizona. It is also very unlikely that the tanks at the Romic facility will contain pure chemical species. The highest calculated vapor pressure at 46.1 oC was that of pure acetone with 71 kilopascals, which is under the maximum vapor pressure limit of 76.6 kPa. Therefore, the existing closed-vent control system is not required for the control of organic emissions the Romic facility.

FIGURES

N

RAIL LOADING & UNLOADING

ROLL-OFF BIN STORAGE

RAINWATER HOLDING TANK

"F"

"G"

"E"

DRUM STORAGE BUILDING #2

PARKING

POLY DRUM CUTTER

ELECTRICAL PANEL

EXIT GATE (ROLLING GATE)

"D2" "D3" "D4"

WASTEWATER TREATMENT

"D1"

136 135 132

EAST BAY PROCESSING AREA

221 222 219 220 217 218

Spoly Lpoly

CANOPY

WASTE STORAGE TANKS

113 124 123 122 121

WEST BAY PROCESSING AREA

215 216 213 214 211 212

COOLING TOWERS

LOCKER ROOM/LUNCHROOM

OFFICE

OFFICE

OFFICE

PARKING

ALLISON ROAD

"C1"

DRUM STORAGE BUILDING #1

DRUM CRUSHER

AEROSOL UNIT

"C2" "C3" "C4"

THIN FILM UNIT

CONTROL ROOM

ENTRANCE GATE (ROLLING GATE)

FIRE WATER FOAM SYSTEM SHED

100

104 103 102 101 200 112 105 204 203 202 201 MWPC AC AO 210

BOILER

LAB

OFFICE

PARKING

MAINT.

TRUCK MAINTENANCE

"B" WASTE STORAGE TANKS

"A" VACUUM POT UNIT

VOC SKID

DISTILLATION UNIT

BOILER BLOWDOWN TANK

0 60

SCALE IN FEET

REV	DATE	REVISION	BY
5	6-15-05	Blowdown, foam, panel, trees, parking	RP
4	6-14-05	Add label for Tank 100	RP
3	6-06-05	TFE-VP-Col Area, C2, C3, D1, D3, D4	HT
2	5-10-05	Make as built drawing	RP

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ENGINEERING DEPARTMENT

ROMIC – SOUTHWEST
CHANDLER, ARIZONA
FACILITY LAYOUT
STORAGE AND TREATMENT AREAS
(EXISTING)

DATE: 03-30-04
SCALE: NONE

D-1

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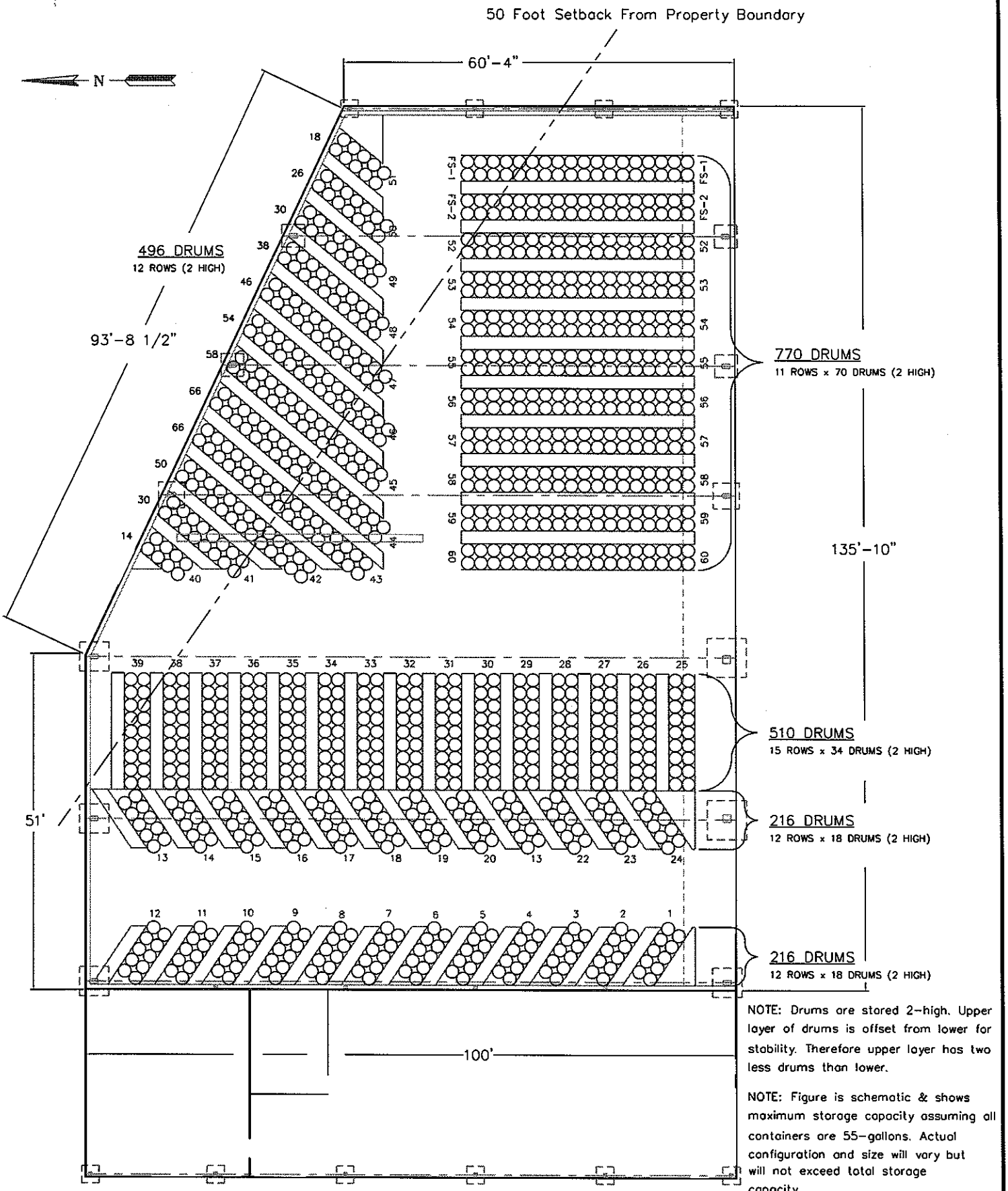

NOTE: Drums are stored 2-high. Upper layer of drums is offset from lower for stability. Therefore upper layer has two less drums than lower.

NOTE: Figure is schematic & shows maximum storage capacity assuming all containers are 55-gallons. Actual configuration and size will vary but will not exceed total storage capacity.

REV	DATE	REVISION	APP
2	10/04	Change rows to FS-1, FS-2	MT
1	3/04	Various revisions	MT

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CHANDLER, ARIZONA
DRUM STORAGE
BUILDING 1

DATE: 12-05-02
SCALE: NONE

D-2

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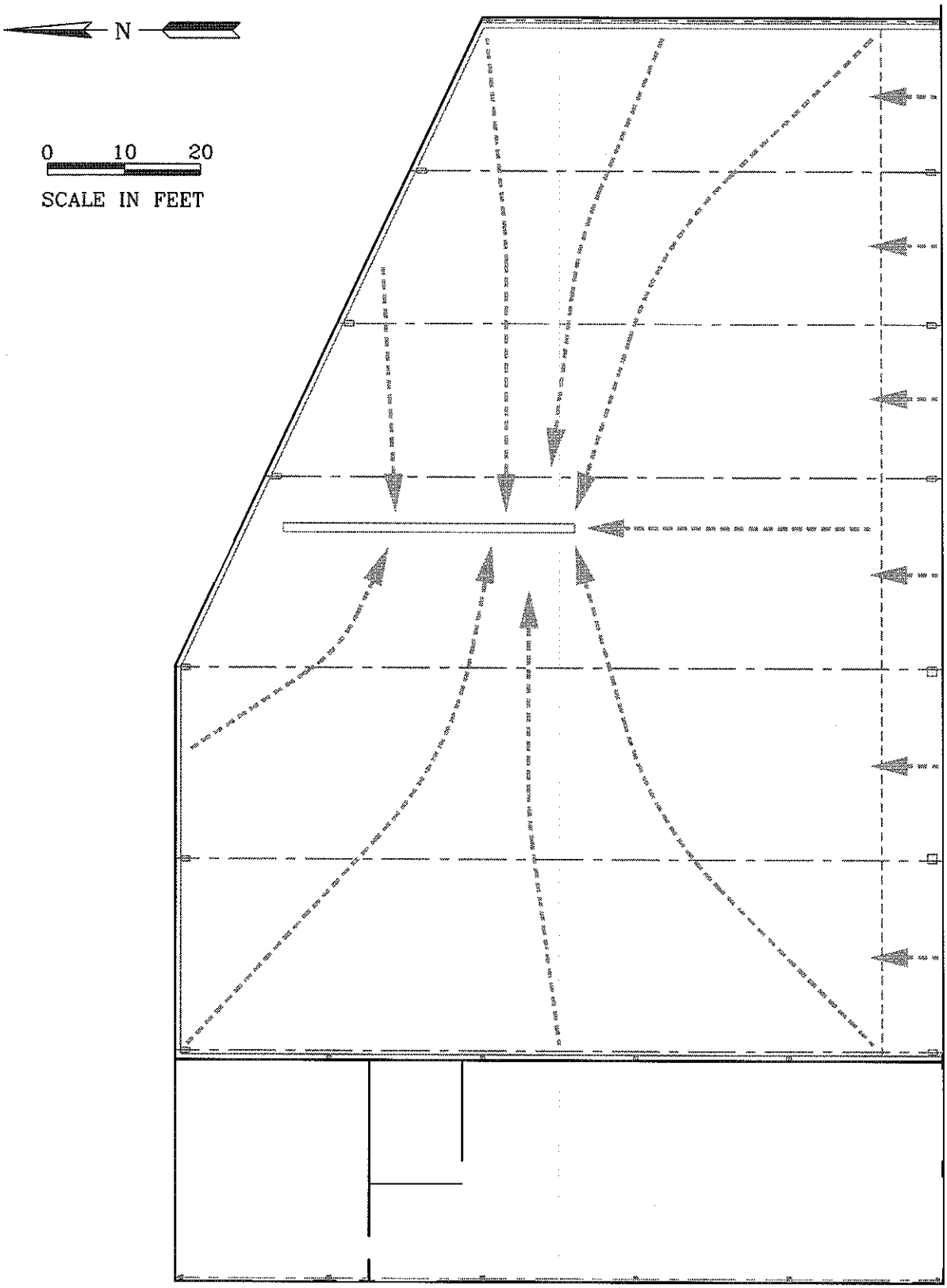

REV	DATE	REVISION	APP
1	4/04	Updated border	RP

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CHANDLER, ARIZONA

DRAINAGE IN STORAGE BUILDING #1

DATE: 12-05-02
SCALE: NONE

D-3

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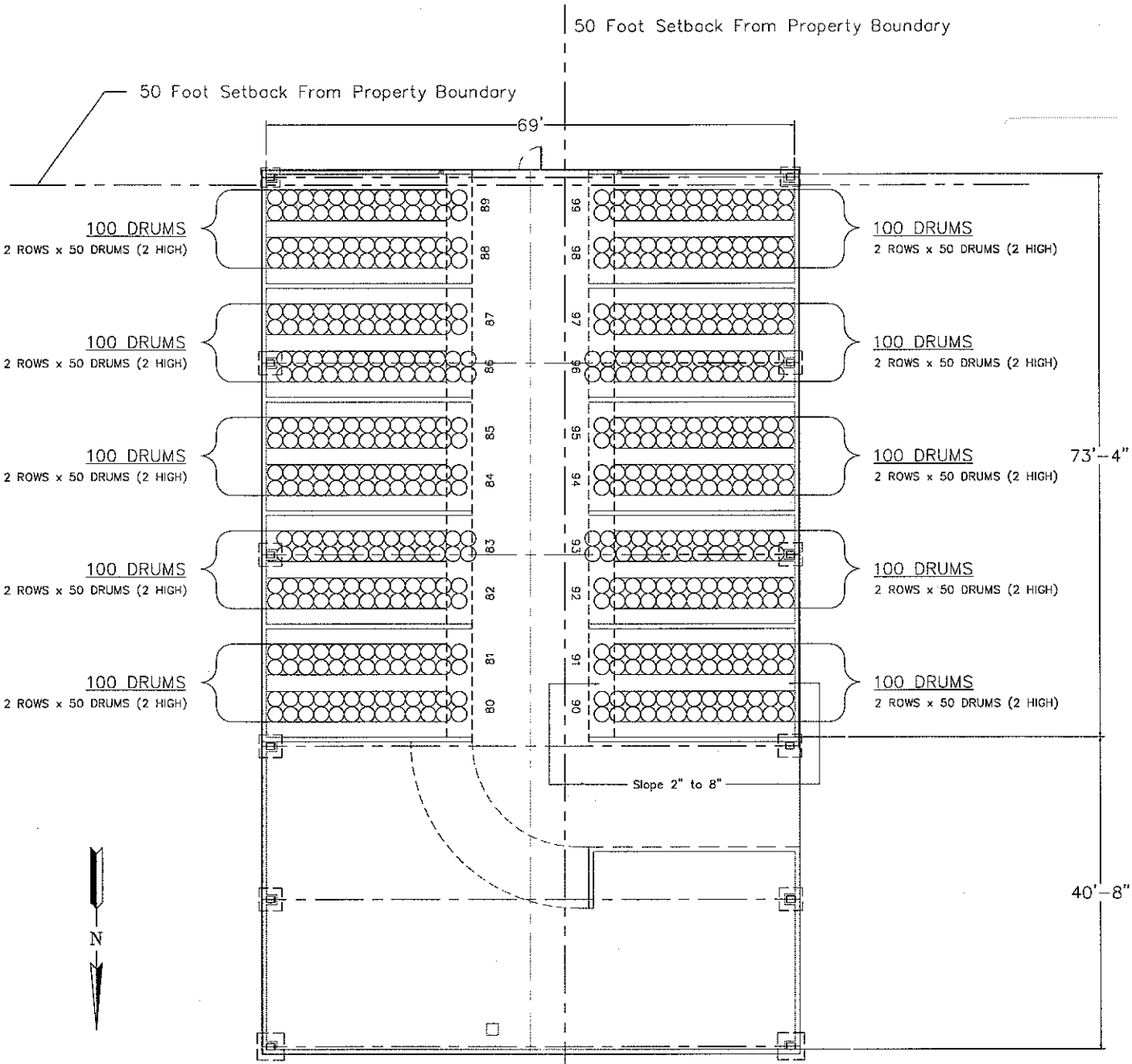

NOTE: Drums are stored 2-high. Upper layer of drums is offset from lower for stability. Therefore upper layer has two less drums than lower.

NOTE: Figure is schematic & shows maximum storage capacity assuming all containers are 55-gallons. Actual configuration and size will vary but will not exceed total storage capacity.

REV	DATE	REVISION	APP
1	3/04	Various revisions	MT

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CHANDLER, ARIZONA
DRUM STORAGE
BUILDING 2

DATE: 12-05-02
SCALE: NONE

D-4

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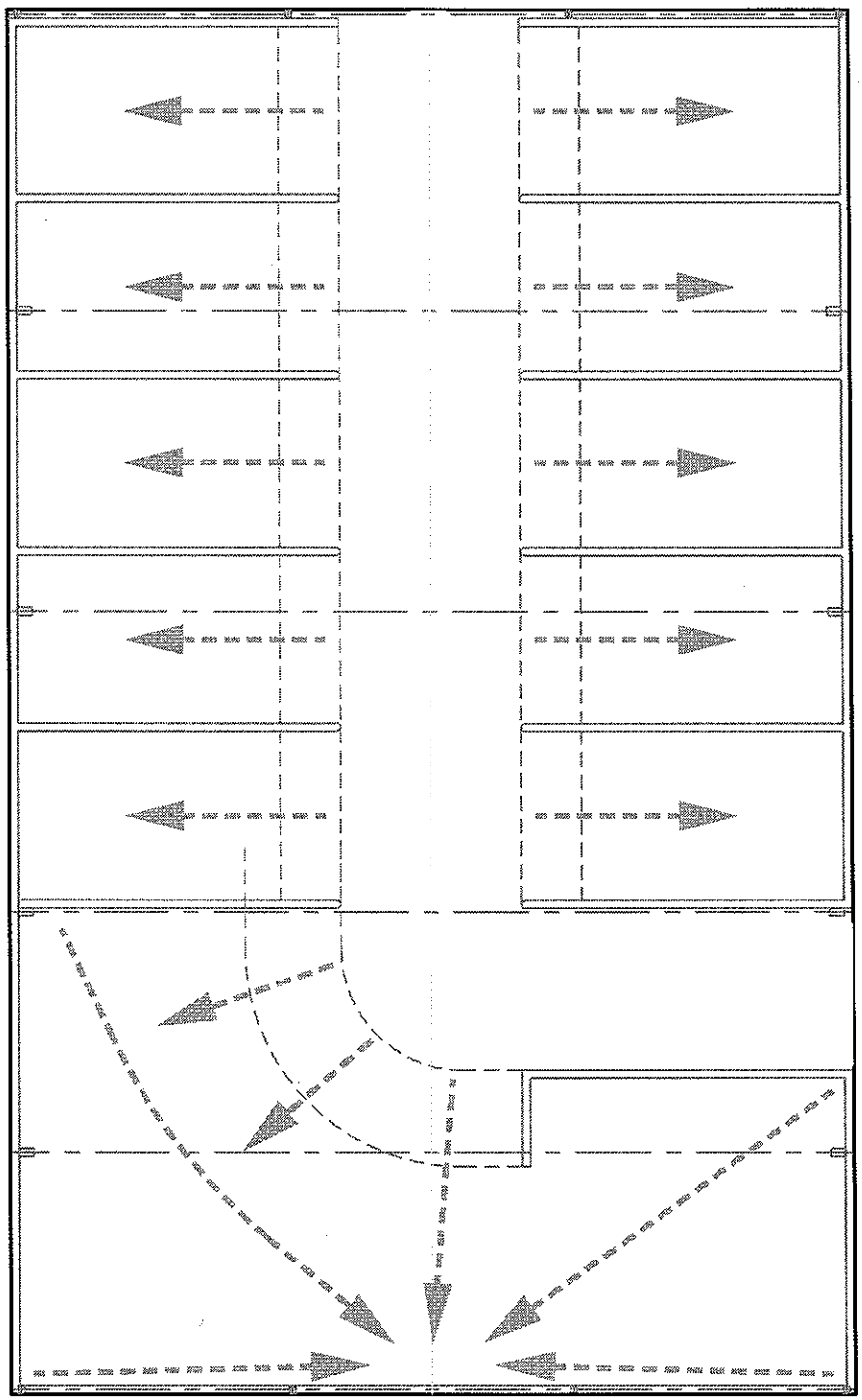

N

0 10 20

SCALE IN FEET

REV	DATE	REVISION	APP
1	4/04	Updated titleblock	WK

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CHANDLER, ARIZONA

DRAINAGE IN STORAGE BUILDING #2

DATE: 12-05-02
SCALE: NONE

D-5

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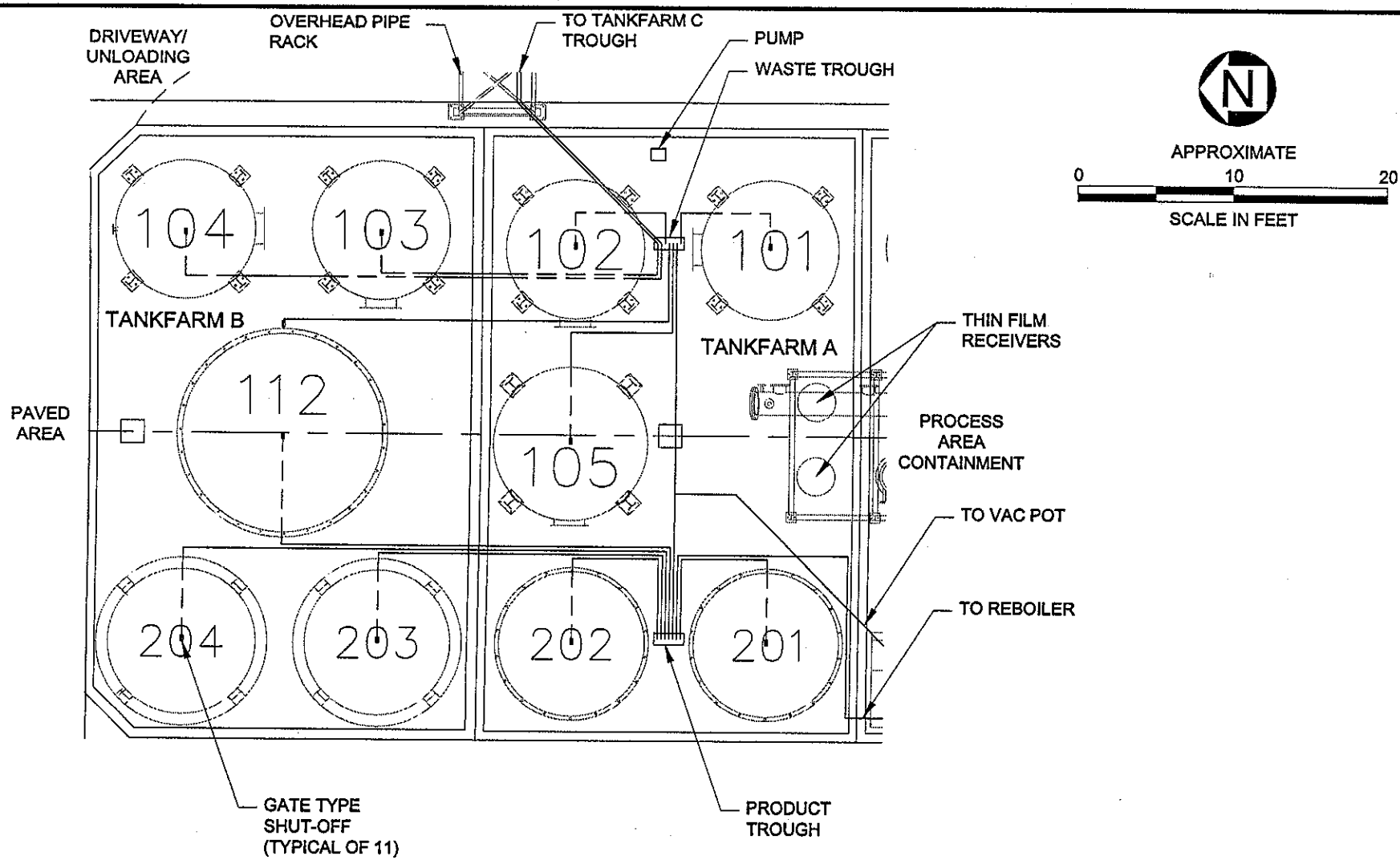

REFERENCE: BASEMAP PROVIDED BY:

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URS

Tankfarm A & B

Romic - Southwest
Chandler, Arizona

Figure D-6

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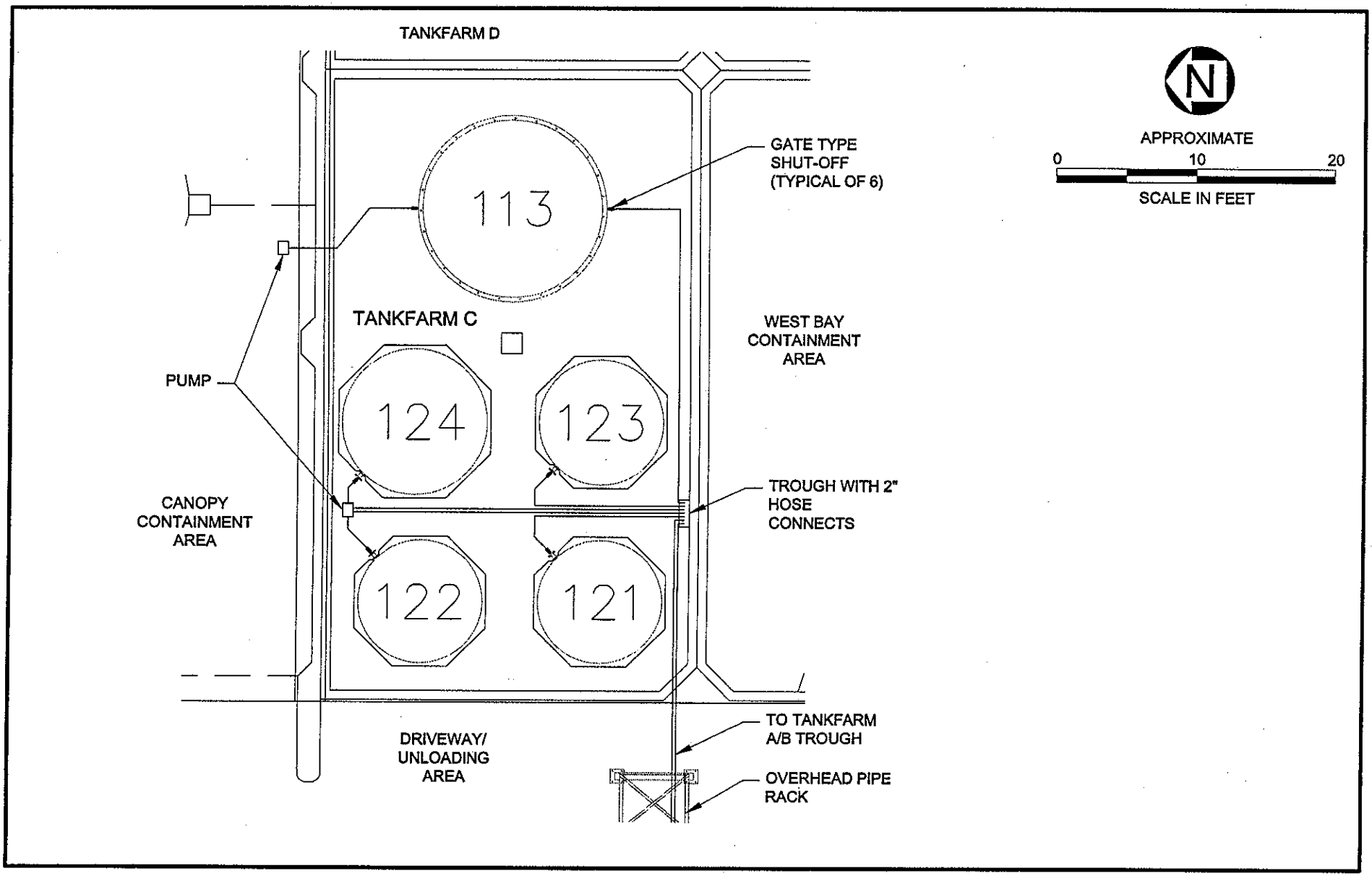

REFERENCE: BASEMAP PROVIDED BY:

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URS

Tankfarm C

Romic - Southwest
Chandler, Arizona

Figure D-7

P:\ROMIC\CADD\FIGURES\A16454.DWG 02-14-05
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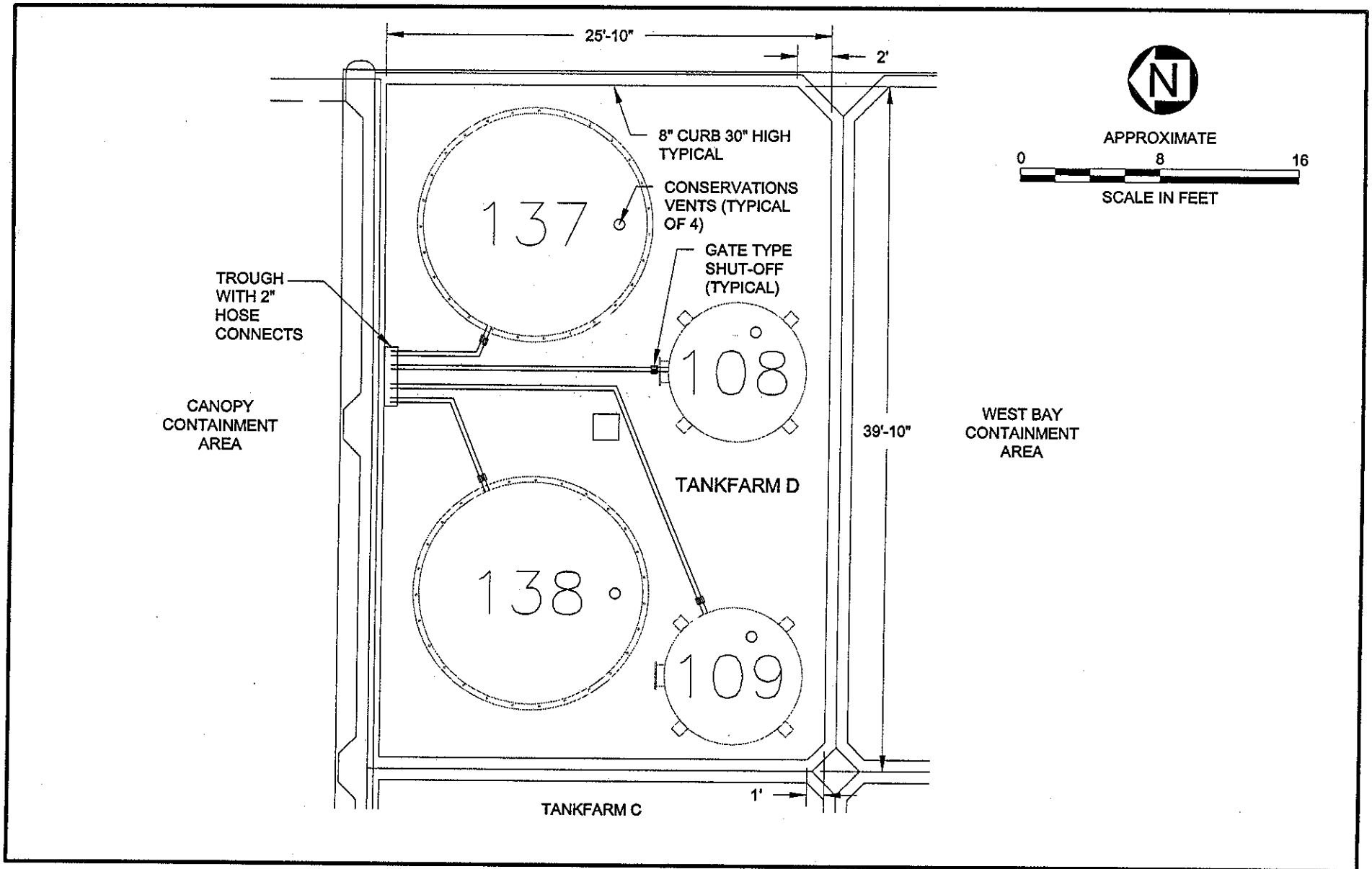

REFERENCE: BASEMAP PROVIDED BY:
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URS

Proposed Tankfarm D

Romic - Southwest
Chandler, Arizona

Figure D-8

P:\ROMIC\CADD\FIGURES\A16433.DWG 02-04-05
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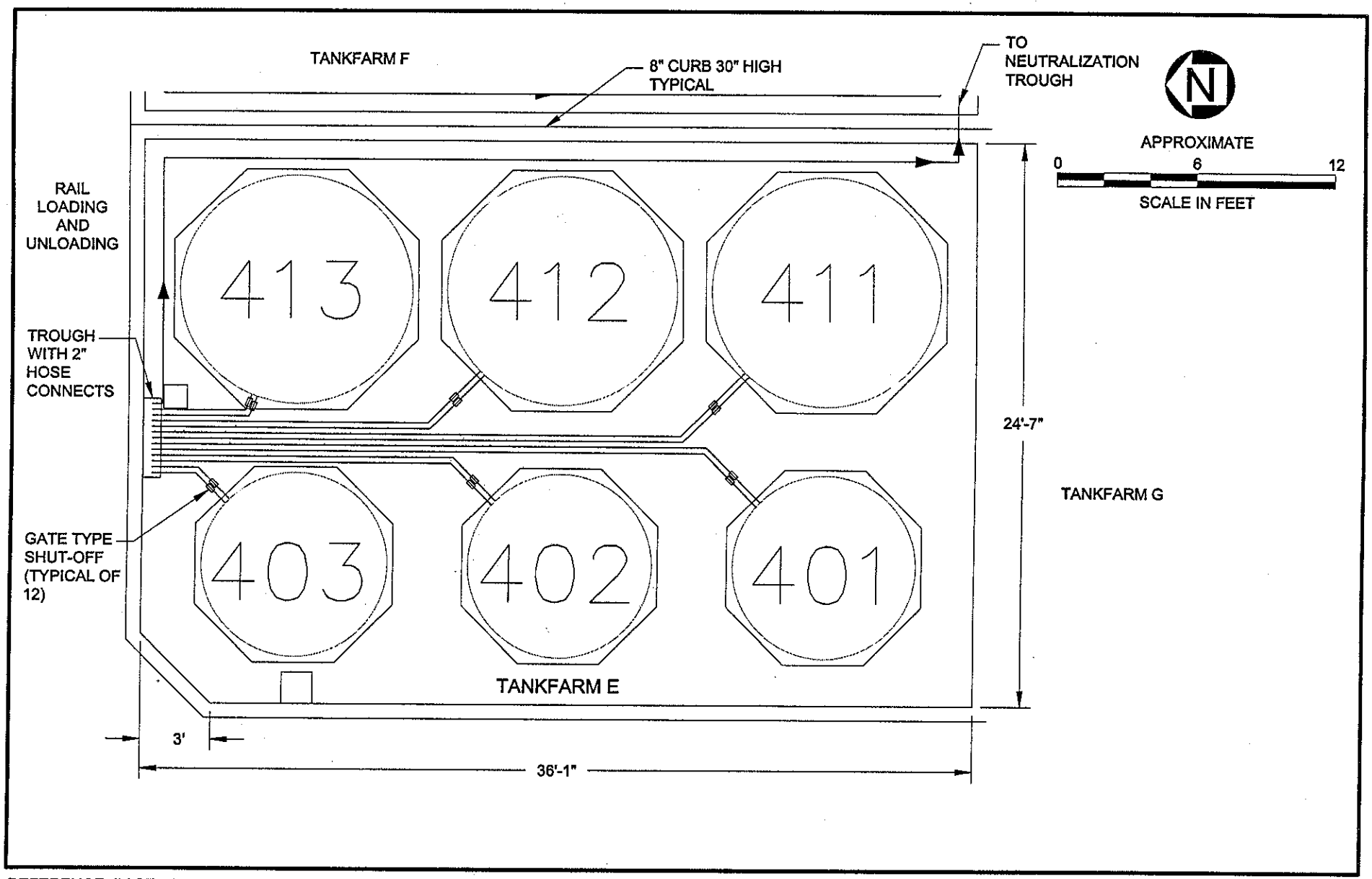

REFERENCE: BASEMAP PROVIDED BY:

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ROMIC SOUTHWEST, CHANDLER, ARIZONA

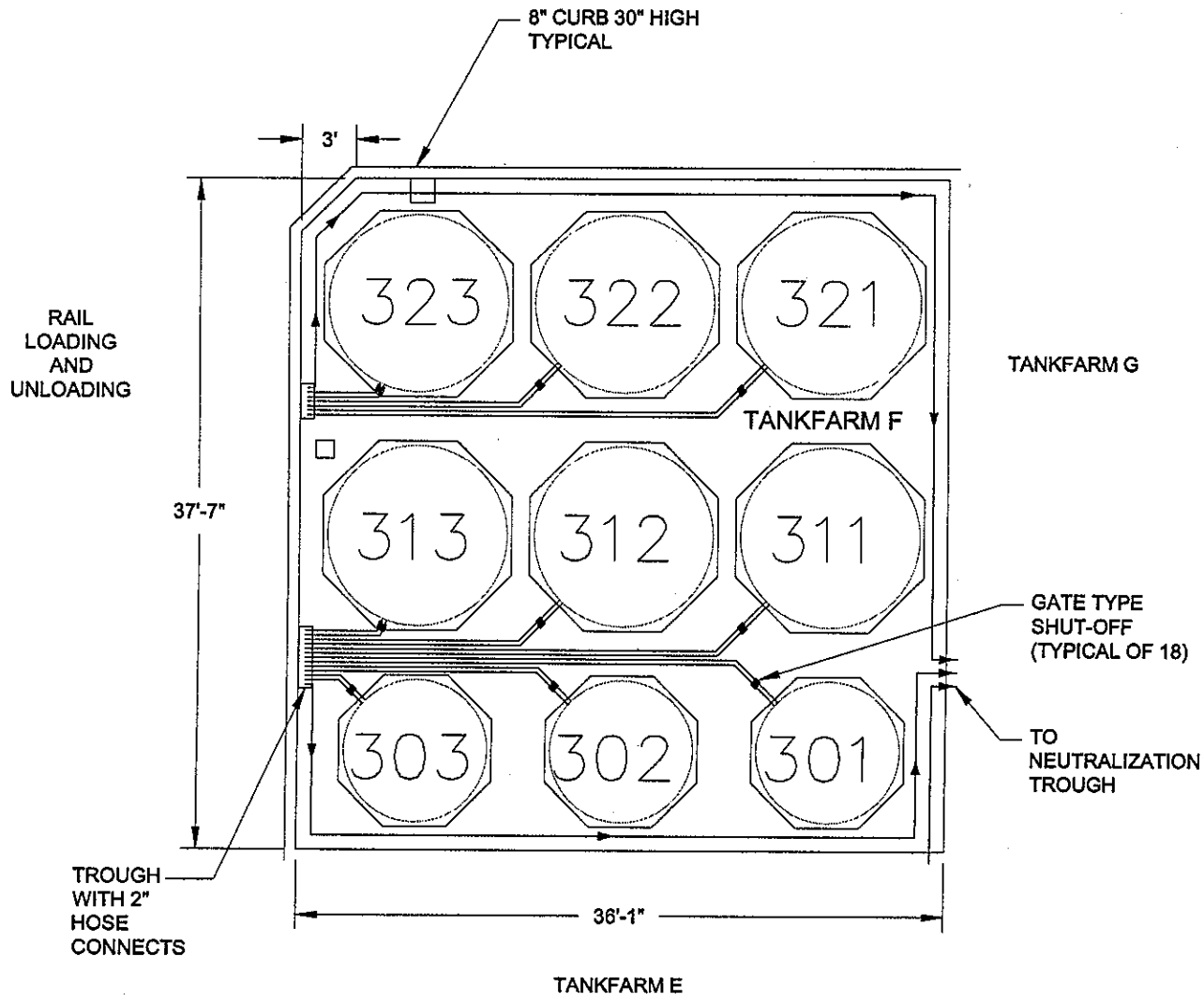
URS

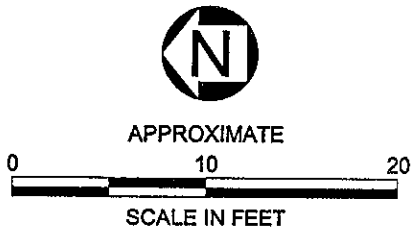
Proposed Tankfarm E

Romic - Southwest
Chandler, Arizona

Figure D-9

P:\ROMIC\CADD\FIGURES\A16434.DWG 02-04-05
XREF: P:\ROMIC\CADD\FIGURES\ROMIC-SITE.DWG





REFERENCE: BASEMAP PROVIDED BY:

ROMIC
ENVIRONMENTAL TECHNOLOGIES CORP.
ROMIC SOUTHWEST, CHANDLER, ARIZONA

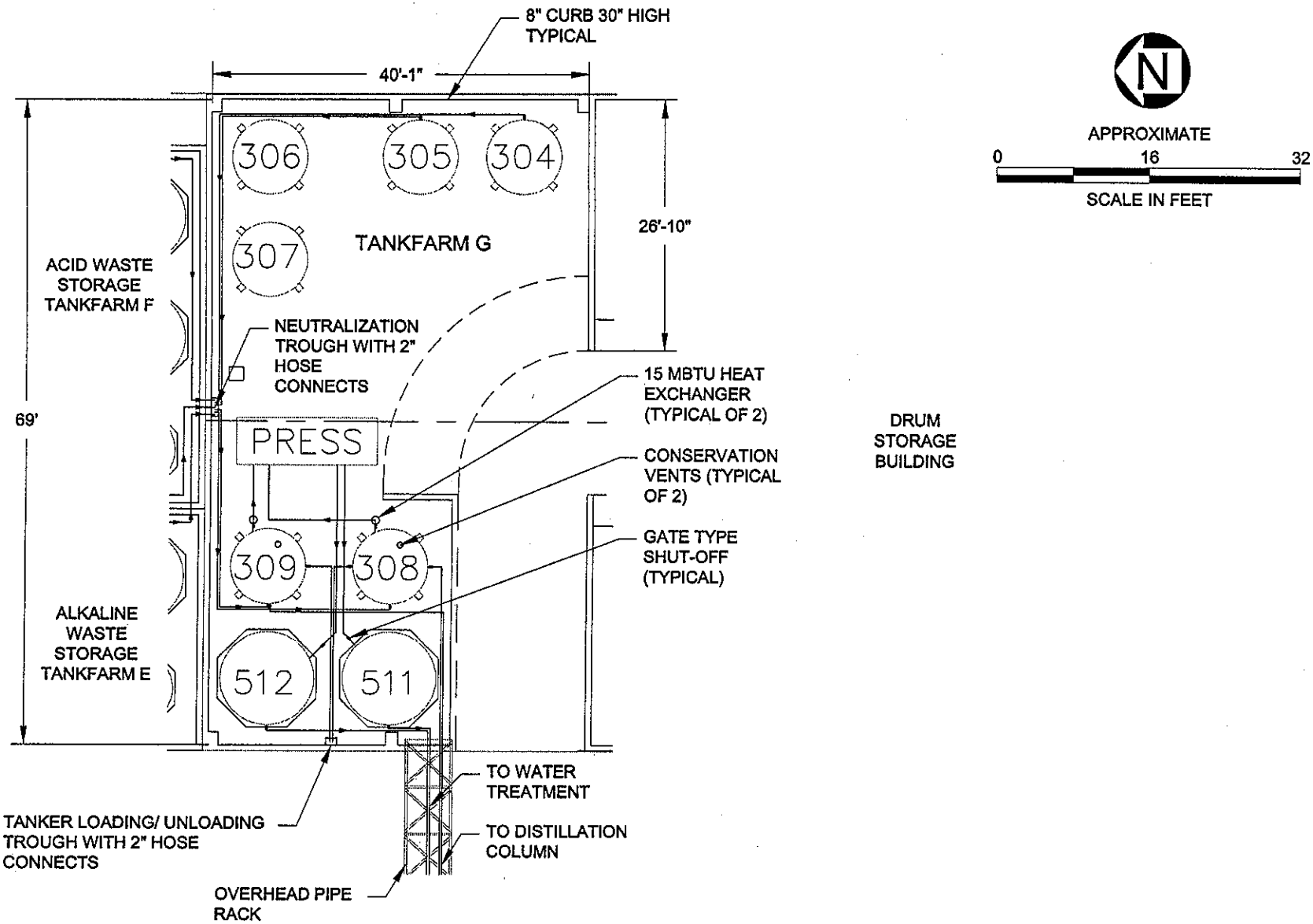
URS

Proposed Tankfarm F

Romic - Southwest
Chandler, Arizona

Figure D-10

P:\ROMIC\CADD\FIGURES\A16435.DWG 02-04-05
XREF: P:\ROMIC\CADD\FIGURES\ROMIC-SITE.DWG



REFERENCE: BASEMAP PROVIDED BY:

ROMIC
ENVIRONMENTAL TECHNOLOGIES CORP.
ROMIC SOUTHWEST, CHANDLER, ARIZONA

URS

Proposed Tankfarm G

Romic - Southwest
Chandler, Arizona

Figure D-11

P:\ROMIC\CADD\FIGURES\A16436.DWG 02-14-05
XREF: P:\ROMIC\CADD\FIGURES\ROMIC-SITE.DWG

TANK FARM A/B

TO TFE FEED

FROM COLUMN PRODUCT PUMP DISCHARGE

FROM TFE BOTTOM

TO TFE FLUSH TANK

FROM TFE RECEIVER TANK

TO COLUMN TROUGH

TO COLUMN TROUGH

T101

T102

T103

T104

T105

T112

4"x3"

2"

1"

3"

EAST TROUGH

WEST TROUGH

TO VACPOT BOTTOM FILL INLET

TO VACPOT TOP FILL INLET

TANK FARM C1 TROUGH

T121

T122

T123

T124

T113

#V17

FILTER

AIRPUMP #V20

#Z12

AIRPUMP #Z15

TANK FARM C1 DRAIN

TANK FARM C1 SUMP

WEST WALL TANK FARM C1

TANK FARM C1

DRUM STORAGE

DRUM STORAGE

RAILSPUR

RAILSPUR

TANKFARM C3 TROUGH

TANK FARM C3

NOTES:

Most sampling valves not shown.

REV	DATE	REVISION	BY	CHK	APP
R4	11/16/05	Tank Farm C1 Updates.	HT	WK	WK

DESIGN/DRAWN BY: H. Tuazon APPROVED BY: W. Kiso

PREPARED FOR: ROMIC SW

PREPARED BY: CLARUS MANAGEMENT SOLUTIONS, INC.

WASTE STORAGE TANKS TRANSFER LINES

DATE: 01/30/05

DRAWING NO: