NORTH TEXAS MUNICIPAL WATER DISTRICT

LOOKOUT DRIVE TRANSFER STATION

RICHARDSON, TEXAS

COLLIN COUNTY

PERMIT AMENDMENT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PERMIT NO.: MSW 53A

October 2012

REVISION 2

Applicant:

North Texas Municipal Water District
PO Box 2408
Wylie, Texas 75098

Prepared by:

CP&Y Inc.
1820 Regal Row, Suite 200
Dallas, Texas 75235
Firm No: 1741
October 17, 2012

Mario A. Perez, Sr., Project Manager
Municipal Solid Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 124
Austin, Texas 78711-3087

Re: Lookout Drive Transfer Station-Collin County
Municipal Solid Waste (MSW) Permit No. 53A
Major Amendment Application-Response to September 19, 2012 Second Notice of Deficiency (NOD) Tracking Nos. 15004597, 15968202
CN601365448/RN1027778438

Dear Mr. Perez:

This letter is in response to the Second Notice of Deficiency letter dated September 19, 2012 for the above referenced Permit Amendment Application. Each comment, followed by our response is presented below. Also attached is an original certification statement, in accordance with 30 TAC §305.44.

PART II OF THE APPLICATION

1. Page 2, Section 2 Existing Conditions Summary, states in part that "the maximum quantity of waste to be stored at one time at this facility is 900 tons." Your response to Comment 2 of our January 23, 2012 First Technical NOD letter states that "the quantities of recyclables (white goods and tires) are not included" in this amount since they are not solid wastes. Please note that all materials stored on site should be quantified, in part to provide information that is required to estimate closure costs and to ensure that the storage is manageable in accordance with the design capacity of the facility. The definition for recyclable material in 30 TAC §330.3(122), states in part that "recyclable material may become solid waste at such time, if any, as it is abandoned or disposed of rather than recycled, whereupon it will be solid waste with respect only to the party actually abandoning or disposing of the
material. "For the purposes of providing a worse case closure cost estimate, the TCEQ considers all recyclable material to be a solid waste in the event it is abandoned. This information may be provided in Section 2 Existing Conditions Summary, the Closure Cost Estimate, and all applicable portions of the application. Please revise the closure cost estimate accordingly.

Response: Part II, Closure Cost Estimates (Appendix III-A), Part IV-A page 2, and Part IV-B page 2 have been revised to quantify the storage of recyclable material as defined in 30 TAC §330.3(122).

2. Pages 2 through 5, Section 3 Waste Acceptance Plan, addresses quantities and storage for used oil, white goods, and tires. Please provide more information regarding the location, dimensions and maximum storage capacity for recyclable material, and tank capacity for used oil, for both the existing and proposed facilities. Please provide general construction information for the used oil container in accordance with 30 TAC §330.63(b)(2)(D), regarding general construction details for storage and processing units and ancillary equipment. Additionally, please address how secondary containment for the used oil container will be designed to contain an oil spill from draining onto the tipping floor and/or into the public sewer system. Finally, provide an explanation as to how the used oil storage tank will be protected from facility operations and the use of heavy machinery. This information may be provided in Section 3 Waste Acceptance Plan and/or the Site Operating Plan and all applicable portions of the application. Please revise the application accordingly.

Response: Part II pages 2-3, Part IV-A pages 2-3, and Part IV-B pages 2-3 have been revised to provide more information regarding the location, dimensions and maximum storage capacity for recyclable material, and tank capacity for used oil. General construction information for the used oil container and information on the protection of the used oil container has also been provided in the aforementioned Sections.

3. Pages 2 through 5, Section 3 Waste Acceptance Plan, states in part that tires may be accepted and stored on site. Please provide more information regarding tires, the location and dimensions for the tire storage area, the quantities proposed to be stored, and procedures for the management of the tires in accordance with applicable requirements prescribed in 30 TAC Chapter 328, Subchapter F; Management of Used or Scrap Tires. This information should be provided in the Site Operating Plan for each facility as applicable.

Response: Part II pages 2-5, Part IV-A pages 2-4, and Part IV-B pages 2-4 have been revised to provide more information regarding the location, dimensions, maximum storage capacity of scrap tires and procedures for the management of the tires in accordance with applicable requirements prescribed in 30 TAC Chapter 328, Subchapter F.
4. The Part II Table of Contents contains a list of Appendices for which a portion has been omitted from the application. Appendix II-C Texas Historical Commission Review, Appendix II-E Texas Department of Transportation Coordination, Appendix II-F Federal Aviation Administration Coordination, and Appendix II-G Facility Development Approval were listed but not included in any of the application copies under technical review. Please provide the appendices in your response to this letter.

Response: Appendix II-C Texas Historical Commission Review, Appendix II-E Texas Department of Transportation Coordination, Appendix II-F Federal Aviation Administration Coordination, and Appendix II-G Facility Development Approval were submitted in the original application submittal but were not included in the response to the January 23, 2012 NOD as they did not change. However, these appendices have been provided in this response as requested.

5. The Land Use Analysis Drawing, Figure LU-1 Metropolitan Context, does not have certain required map/drawing attributes prescribed in 30 TAC §330.57(h), such as a dated title block; a revision block; a responsible engineer's or geoscientist's seal; a page number; and a legend to identify the attributes of the map/drawing. Please revise this map to include the aforementioned attributes and the appropriate engineer or geoscientist seal. Please also ensure that all maps/drawings throughout the application have all the required and/or appropriate attributes and professional seal(s).

Response: Figure LU-1 has been revised to include title block, revision block, page number, legend and other attributes. These drawings have not been sealed pursuant to 30 TAC 330.57(h)(4)(D) which only calls for drawings to be sealed if required. These drawings do not require an Engineer's or geoscientist's seal as these are land use drawings. All land use drawings (LU-1 through LU-5) have been revised similarly.

6. The Land Use Analysis Drawing, Figure LU-2-Zoning-2Mile, is labeled throughout the drawing with what appears to be zoning codes. The codes are not identified and there are other attributes omitted from the drawing. Please provide a legend that identifies the zoning codes and revise the map to include applicable attributes prescribed in 30 TAC §330.57(h), regarding maps and drawings.

Response: Figure LU-2 has been revised per your request and as noted in the response to Comment No. 5 above. The zoning codes were included in the original Appendix II-H. As they did not change they were not provided in the response to the January 23, 2012 NOD. For clarification, Appendix II-H has been provided with this response.

7. The General Location Map, Attachment II-1, includes a notation (Note No. 9), stating that "Airports located within 6 miles of the Phase 1 Permit Boundary are shown on
Attachment II-2." The attachment referenced (Attachment II-2) depicts 2 airports outside a 6 mile radius from the facility's permit boundary. Please clarify if any airports are within the 6 mile radius of the facility and note the information appropriately on the map and throughout applicable portions of the application.

**Response:** Note No. 9 on the General Location Map, Attachment II-1 has been revised to clarify that there are no airports located within 6 miles of the permit boundary.

8. The Proposed Facility Layout, Attachment II-3-2, includes a notation (Note No. 5), stating that the "Used Oil Drop Off Area may be moved as noted on Attachment III-1." Note No. 3 on Attachment III-1 states that the "Used Oil Drop Off Area may be relocated within vehicle backing area." Please explain if the vehicle backing area is part of the tipping floor area and how it will be designed and constructed to address the items listed in Comment No. 3 of this letter regarding used oil storage and secondary containment.

**Response:** As shown on Attachment III-1, the vehicle backing area is part of the tipping floor but not for storage of solid waste. Attachment III-1 has not been revised but has been included in this Response for your review convenience. Part II, Part IV-A, and Part IV-B have been revised to provide more information regarding protection of the used oil container as noted in the response to Comment No. 2.

**PART III OF THE APPLICATION**

9. Part III, Page 1, Section 1 Introduction, states in part that ". . . the facility will have a design capacity in excess of 1500 tons per day for peak conditions." Please provide information to demonstrate what the theoretical design capacity is for the facility. Title 30 TAC §330.241(a), states that "The design capacity of a solid waste processing . . . facility shall not be exceeded during operation. The facility shall not accumulate solid waste in quantities that cannot be processed within such time as will preclude the creation of odors, insect breeding, or harborage of other vectors. If such accumulations occur, additional solid waste shall not be received until the adverse conditions are abated." In order to determine the design capacity for throughput, processing, and storage, please provide information to demonstrate theoretically the maximum capacities of waste acceptance including the acceptance of recycling material in accordance with the aforementioned rule. This information must be provided for the existing and proposed facilities. Please consider this as reasonably required information requested in accordance with 30 TAC §330.57(d), and 30 TAC §281.5(7).

**Response:** The basis of the facility design capacity and storage capacities of the existing and proposed facilities has been added as Appendix III-E.
10. Part III, Page 9, Section 3.2.3 General Construction Details, states in part that the "proposed building foundations will be designed based upon the soil conditions to be determined after a complete site soils investigation as part of the construction drawing development process." In accordance with 30 TAC §330.63(b)(2)(D), please provide the general construction details for building foundations and in addition, reference where in the application construction details may be located for all storage and processing units and ancillary equipment (i.e., tanks, foundations, sumps, etc.) with regard to approximate dimensions and capacities, construction materials, vents, covers, enclosures, protective coatings of surfaces, etc. Please provide performance data on all units. The information may be submitted in table form. Please reference Comment 3 of this letter.

Response: General construction details and building sections for the Proposed Transfer Station can be found on Attachment III-3 and Attachment III-4 included with the response to the January 23, 2012 NOD. These attachments did not change but are included with this response for your review convenience. The building foundations and push walls will be reinforced concrete as noted on the Attachments. There are no additional storage or processing units nor ancillary equipment located on site except for mobile equipment noted in Section 5.1.3 of Part III.

11. Part III, Page 26, Section 5.1.2 Storage Capacity and Maneuver Space, references the continued utilization of an existing Citizen Collection Station for the existing facility. However, for the proposed facility, it appears that in reference to the Site Operating Plan, Part IV-B for the proposed facility, a Citizen Collection Station will not be utilized. Please submit more information regarding the location, dimensions, access and egress for the existing citizen collection station and depict the attributes on the Facility Layout Existing drawing, Attachment II-3-1.

Response: Attachment II-3-1 (unchanged, but included in this response for review convenience) depicts the existing citizen collection area on the southwest corner of the existing facility. This is drawn to scale. Access and egress is shown with arrows. There will be no separate citizens collection area located outside of the Proposed Transfer Station as all solid waste unloading (including waste delivered by citizens) will occur inside the proposed building.

12. Part III, Page 29, Section 9.1.2 Certification of Final Closure, the last sentence in this section references Phase 3. The application appears to reference only 2 phases. Please remove this reference or explain Phase 3 throughout the application.

Response: Part III, Section 9.1.2 has been revised to correct the reference to the appropriate Phase 2.

13. Part III, Appendix III-A, Closure Cost Estimate Existing Lookout Drive Transfer Station and Closure Cost Estimate Proposed Lookout Drive Transfer Station contain calculations for cleanup and removal of waste and recyclables. Please account for
the maximum inventories of all wastes and recyclables in all phases of throughput at each of the facilities based on the design capacities for each facility. Please submit this information in accordance with 30 TAC §330.505(a)(2)(A)(B) and (C), regarding closure cost estimates. See Comment 2 in this letter for related concerns.

Response: Each of the closure cost estimates in Appendix III-A has been revised to account for the maximum inventories of all wastes and recyclables in all phases of throughput at each of the facilities based on the design capacities for each facility.

PART IV-A AND PART IV-B OF THE APPLICATION

14. Page 3, Part IV, Section 3 Waste Acceptance and Analysis, Prohibited Wastes, lists whole or scrap tires as a prohibited waste. Pages 2 through 5, Section 3 Waste Acceptance Plan, states in part that tires may be accepted and stored on site. Please revise the sections to clarify whether tires will be accepted for recycling. Please see Comment 4 in this letter for related concerns.

Response: The statement “except for recycling” has been added to Parts IV-A and IV-B, Section 3 Waste Acceptance and Analysis to clarify that used tires will only be accepted for recycling.

15. Page 9, Part IV, Section 5 Contaminated Water Management, states in part that the facility will comply with certain requirements for discharging waste waters to a treatment facility permitted under Texas Water Code Chapter 26. Please explain if the existing facility is currently permitted to discharge contaminated water to a locally permitted waste water treatment facility and submit as an attachment, a copy of the wastewater permit and explain whether it is applicable to both existing and proposed facilities.

Response: As is noted in Section 5 of Part IV-A and Part IV-B, the oil and grease concentration leaving the facility will not exceed 200 milligrams per liter. This meets the requirements of 30 TAC 330.207(g). In addition, the current facility does not require, nor will the proposed facility require, a wastewater permit as the quantity of water discharged to the sanitary sewer system is less than the amount that is required to have a permit.

16. Page 10, Part IV, Section 7 Approved Waste Containers, states in part that "solid waste that is received containing food wastes will be placed in a covered area or in a receiving area where any runoff is collected and properly handled." Please be aware that 30 TAC §330.211, regarding Approved Containers, requires that "all solid waste containing food wastes shall be stored in covered or closed containers that are leak-proof, durable, and designed for safe handling and easy cleaning." Please explain if the aforementioned food wastes will be stored in the prescribed container(s) and provide the location(s) for the container(s).
Response: Food waste is only collected as part of the municipal solid waste stream. All solid waste will be transferred and only temporarily stored inside the transfer station and not in containers.

17. Page 11, Part IV, Section 9 Requirements for Stationary Compactors, provides for stationary compactors at the existing facility but not for the proposed facility. Please provide more information regarding the quantity and location (narrative and depiction) of the compactors.

Response: More information regarding the quantity and location of the compactors has been provided Part IV-A - Section 9 for the existing transfer station. Stationary Compactors will not be utilized in the Proposed Transfer Station.

18. Page 11, Part IV, Section 11 Recordkeeping and Reporting Requirements, states in part that "a copy of the permit, the approved permit application, and all other related or required plans or documents will be maintained at the NTMWD administrative offices located at 505 E. Brown Street in Wylie, Texas." Please ensure that these documents are also maintained on site at the Lookout Transfer Station Facility, in accordance with 30 TAC §330.219(a), which prescribes that a copy of the permit or registration, the approved permit or registration application, and any other required plan or other related document shall be maintained at the municipal solid waste facility at all times during construction.

Response: In Part IV-B, Section 11, the sentence "During construction a copy of the approved Permit Application will be maintained at the Lookout Drive Transfer Station" has been revised to read, "During construction, a copy of the approved Permit Application and any other required plan or other related document will be maintained at the Lookout Drive Transfer Station. The Site Operating Record for the Existing Transfer Station is not required to be maintained at the Lookout Drive Transfer Station, but will be maintained at the NTMWD Administrative Offices in Wylie." Part IV-A does not include this requirement as there will be no additional construction at the existing facility.

19. Page 13, Part IV-A, Section 11 Recordkeeping and Reporting Requirements, Table 1 Operating Record, provides a list of records that will be maintained on site. Please include on the list documents pertaining to odor management. Please also revise the rule citation on Table 1 of Part IV-B Site Operating Plan, page 14, item 7; "Any other document as specified... by the executive director" under 30 TAC §330.219(b)(6); to the correct rule citation of 30 TAC §330.219(b)(7). Additionally, please correct the rule citations for items 4 through 6, and 8 through 12 in the aforementioned table to be consistent with §330.219(b).

Response: Page 13, Part IV-A, Section 11, Table 1 has been revised to include "Documents pertaining to the Odor Management Plan". Part IV-B, Section 11, Table 2 has been revised to correct the rule citations.
20. Page 23, Part IV-A, Section 24 Ventilation, Odor and Air Pollution Control, states in part that the applicant will obtain authorization, under 30 TAC Chapter 116 or Subchapter U of Chapter 330, prior to the start of construction. Please note that if the application is approved, a standard permit condition will be placed into the permit document stating that construction may not begin until the applicant obtains the appropriate air permit to operate the facility. The applicant has the option to obtain an air permit during the technical review of the major permit amendment application.

Response: The District understands that it has the option to obtain an air permit during the technical review.

One original and two copies of the application revisions are being submitted for your review. One copy of the revisions is being submitted directly to the TCEQ Region 4 office for their review as well. One of the copies being submitted to you is a ‘redline/strikeout’ version to highlight the revisions. All revised pages are noted with a revision date and note in the footer that the sheet is revised.

If you have any questions, or need additional information, please do not hesitate to contact me or Mr. Jeff Mayfield at the number on the letterhead.

Sincerely,

[Signature]

JAMES M. PARKS
Executive Director

Attachments

cc: Tony Walker - TCEQ Region 4
    Jeffrey D. Mayfield, P.E. - NTMWD
    William R. Hindman, P.E. - CP&Y, Inc.
    Jeffrey Reed- Lloyd Gosselink Rochelle & Townsend, P.C.
    Duncan Norton-Lloyd Gosselink Rochelle & Townsend, P.C.
    NTMWD Central File 9.1.6
I, JAMES M. PARKS, (Operator)

executive director, (Title)

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

Signature: _______________________________ Date: 10/17/2012

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, _______________________________, hereby designate _______________________________, (Print or Type Operator Name) (Print or Type Representative Name)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Printed or Typed Name of Operator or Principal Executive Officer

Signature

SUBSCRIBED AND SWORN to before me by the said _______________________________, On this _______________________________ day of _______________________________, 2012

My commission expires on the _______________________________ day of _______________________________, 2013

______________________________
MELISA FULLER
Notary Public
State of Texas
My Comm. Exp. 06-14-2013

(Note: Application Must Bear Signature & Seal of Notary Public)
# Table of Contents

1. Purpose .................................................................................................................. 1
2. Existing Conditions Summary [§330.61(a)] .............................................................. 1
3. Waste Acceptance Plan [§330.61(b)] .................................................................... 2
4. General Location Maps [§330.61(c)] ................................................................... 5
5. Facility Layout Maps [§330.61(d)] ........................................................................ 6
6. General Topographic Maps [§330.61(e)] ............................................................... 6
7. Aerial Photograph [§330.61(f)] ............................................................................. 6
8. Land-use Map [§330.61(g)] .................................................................................. 6
9. Impact on Surrounding Area [§330.61(h)] .............................................................. 6
   9.1. Zoning .............................................................................................................. 6
   9.2. Land Use ........................................................................................................ 7
   9.3. Growth trends ................................................................................................ 8
   9.4. Proximity ....................................................................................................... 8
   9.5. Wells ............................................................................................................. 8
10. Transportation [§330.61(i)] ................................................................................. 9
   10.1. Adequacy of Roads ...................................................................................... 9
11. Geology and Soils [§330.61(j)] ......................................................................... 11
12. Groundwater and Surface Water [§330.61(k)] .................................................... 11
13. Abandoned Oil and Water Wells [§330.61(l)] ...................................................... 12
14. Floodplains and Wetlands [§330.61(m)] ............................................................. 13
15. Endangered or Threatened Species [§330.61(n)] ................................................. 14
16. Texas Historical Commission Review [§330.61(o)] ............................................. 14
APPENDICES
APPENDIX II-A – FLOODPLAIN DETERMINATION
APPENDIX II-B – ENDANGERED SPECIES AND WETLANDS DATA
APPENDIX II-C – TEXAS HISTORICAL COMMISSION REVIEW
APPENDIX II-D – COUNCIL OF GOVERNMENTS REVIEW
APPENDIX II-E – TEXAS DEPARTMENT OF TRANSPORTATION COORDINATION
APPENDIX II-F – FEDERAL AVIATION ADMINISTRATION COORDINATION
APPENDIX II-G – FACILITY DEVELOPMENT APPROVAL
APPENDIX II-H – LAND USE ANALYSIS
APPENDIX II-I – TRANSPORTATION STUDY

ATTACHMENTS
ATTACHMENT II-1 – GENERAL LOCATION MAP
ATTACHMENT II-2 – GENERAL LOCATION MAP (6 MILE RADIUS)
ATTACHMENT II-3-1 – FACILITY LAYOUT – EXISTING FACILITY
ATTACHMENT II-3-2 – FACILITY LAYOUT – PROPOSED FACILITY
ATTACHMENT II-4 – TOPOGRAPHIC MAP
ATTACHMENT II-5 – AERIAL PHOTOGRAPH
ATTACHMENT II-6 – WIND ROSE
1. **Purpose**

This portion of this application describes the existing and proposed conditions of the proposed Lookout Drive Transfer Station, and the surrounding characteristics of the area where it is to be relocated.

2. **Existing Conditions Summary [§330.61(a)]**

The North Texas Municipal Water District (NTMWD) currently owns and operates the Lookout Drive Transfer Station. The Lookout Drive Transfer Station is located east of the intersection of E. Lookout Drive and N. Plano Road in the City of Richardson (City). The existing transfer station was originally designed and constructed by the City in the mid-1970's to serve the needs of the City. The ownership of the Lookout Drive Transfer Station and the associated property (approximately 4.75 acres) was conveyed from the City to NTMWD on August 15, 1980 after the NTMWD solid waste transfer and disposal system was established to serve the cities of Richardson and Plano, and subsequently Allen, Frisco and McKinney (Member Cities).

As noted in Appendix I-A, the existing Lookout Drive Transfer Station site is bounded on the west by a 100 foot wide right-of-way parallel to the site boundary. This right-of-way was conveyed to the City from Owens Country Sausage, Inc. for public street purposes on August 10, 1976. However, prior to conveying this right-of-way to the City, Owens Country Sausage, Inc. had also granted an easement and right-of-way for this same 100 foot wide strip of land on December 6, 1961 to Texas Power & Light Company for electric power lines and communication lines.

The adjacent property on the north side of the current transfer station property is owned by the NTMWD and the east and south sides of the current transfer station property are bounded by property owned by the City. This municipal property is used for storage of materials and equipment, as a fire training center and for a municipal golf course and park. These golf and park facilities are a part of the City recreation system. Owens Country Sausage, Inc. is located immediately to the west of the 100 foot right-of-way/easement which is west of the Lookout Drive site. TXU is utilizing the 100 foot easement with a series of overhead power line transmission towers. This 100 foot wide power line easement is located in the dedicated right of way originally intended for the
extension of Owens Boulevard. This future extension of Owens Boulevard is no longer expected and is no longer a part of the City's Thoroughfare Plan.

The current incoming daily waste tonnage quantities being received at the existing facility exceeds the original waste quantities expected when the facility was designed in the mid-1970s. Over the past several years, the existing concrete driveway maneuvering area immediately in front of the transfer building has been used on occasion for temporary storage of the incoming waste to accommodate these quantities. The temporary storage area in front of the transfer building is uncovered, which makes it more difficult to properly screen operations and control wind-blown materials and odors. The maximum quantity of waste to be stored at one time at the existing facility is 450 tons. The new building, which will be enclosed, will be designed to temporarily store at least 900 tons of waste, while still containing all of the waste handling and temporary storage activities within the building. In addition, up to 40 cy of tire recyclables and 40 cy of white good recyclables will be stored on site at either facility.

NTMWD is aware of the current surrounding land use and issues that may be of concern to residents near the site and has been working with the City and surrounding home owners / neighborhood associations to identify concerns and develop solutions to mitigate these concerns. These neighborhood issues will be discussed in subsequent Sections of Part II, III and IV along with the appropriate mitigation solutions.

The proposed transfer station building will be located north of the existing transfer station building. The access road to the proposed transfer station will be the same access road currently used for the existing transfer station building. Once the proposed transfer station is constructed and operational, all of the operations at the existing transfer station building will cease and the site will be properly closed and the permit boundary reduced as discussed in Part III, Section 2.

3. Waste Acceptance Plan [§330.61(b)]

Authorized Wastes

The Lookout Drive Transfer Station is currently authorized to receive residential, commercial, construction or demolition and Class 2 and Class 3 industrial non-
hazardous municipal solid waste. No industrial hazardous wastes or Class 1 industrial waste will be accepted at the facility. No separate special wastes other than used oil will be accepted at the facility.

Used oil will be temporarily stored in a container until transported off-site by an authorized hauler to an approved oil recycling facility. The container’s size and material may vary if the container is replaced. The container shall be made of steel, HDPE, or other material compatible with the storage of used oil, be double walled or have sufficient secondary containment to contain the entire volume of the container, and have a maximum capacity of 1,000 gallons. While the existing transfer station continues to operate, the used oil container will be located as shown on Attachment II-3-1 and is protected from vehicle traffic by an existing raised curb. After the proposed transfer station is in operation, the used oil container will be located inside the transfer station building as shown on Attachment II-3-2. The container will be located in a corner or adjacent to a wall of the new transfer station building to protect it from facility operations. Additionally, floor paint, cones, barricades, or other suitable traffic control devices will be used around the container to protect it from vehicles and heavy machinery.

Small quantities of special wastes may inadvertently be received if they are unidentified and included as part of the mixed municipal waste stream. These wastes, if identified, will be separated and will not be accepted.

Recyclables (white goods and tires) may also be accepted and temporarily stored on-site in the appropriate recyclable drop-off area, as shown on Attachments II-3-1 and II-3-2, until transported off-site for processing. These materials will be placed in designated roll off container(s) with a maximum capacity of 40 cy each. When sufficient quantities are accumulated, the containers will be transported off-site to an authorized facility for recycling. Tires accepted for recycling shall be managed in accordance with applicable requirements prescribed in 30 TAC Chapter 328, Subchapter F.

Currently NTMWD operates three transfer stations which serve over 690,000 residents in the Member Cities. The Lookout Drive Transfer Station may receive waste from surrounding areas, including any of the Member Cities, but the current primary
contributors of waste are the Cities of Richardson and Plano. Based on the type of waste currently received and expected to be received, there are no constituents or characteristics that would be a limiting parameter that would impact or influence the design and operation of the facility.

After approval of this Application the existing transfer station will continue to operate in accordance with this Application until such time as the proposed transfer facility is constructed and operations move to that facility. The existing transfer station will receive up to an annual average of 750 tons per day (based on 365 days per year). Upon operation of the proposed transfer station, a maximum of 1,500 tons per day and an annual average of 750 tons per day (exclusive of recyclables and based on 365 days per year) of municipal solid waste will be received at the site for subsequent transfer and disposal at an appropriate facility. Based upon a waste generation rate of 5 pounds per person per day this is a population equivalent of 300,000 people. The quantities of materials received at the facility for recycling are not included in the maximum daily or annual average daily tonnage. Approximately 300 gallons of used oil is expected to be received monthly for recycling. These materials will be transported off-site by a registered hauler as the container is filled, or a minimum, at least quarterly. The maximum daily average projected quantities of waste to be received at the facility for the next 5 years are presented in Table-1. The enclosed building at the proposed facility is designed to provide storage capacity for at least 900 tons of waste. The storage capacity is expected to provide adequate capacity on the tipping floor for normal operations. Waste will not be stored overnight at this facility except for extenuating emergency circumstances such as weather or mechanical breakdown. Less than 5 percent, by weight, of the daily waste received is estimated to be composed of Class 2 or Class 3 industrial waste. The remainder will be municipal solid waste.

Waste received at the proposed facility is designed to be managed inside the building on the tipping floor, transferred to top loading transfer trailer trucks and hauled to a permitted Type I Municipal Solid Waste Landfill for disposal.
<table>
<thead>
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<th>Year</th>
<th>Waste Acceptance Rate</th>
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<tr>
<td></td>
<td>(Annual Tonnage (365 days/Yr))</td>
</tr>
<tr>
<td>FY 2013</td>
<td>273,750 (750 tpd average)</td>
</tr>
<tr>
<td>FY 2014</td>
<td>273,750 (750 tpd average)</td>
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<tr>
<td>FY 2015</td>
<td>273,750 (750 tpd average)</td>
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<tr>
<td>FY 2017</td>
<td>273,750 (750 tpd average)</td>
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</tbody>
</table>

The maximum quantity of waste to be stored at the proposed facility is 900 tons. The maximum and average lengths of time that solid waste will remain, at both the existing facility and proposed facility, are 3 days and 1 day or less, respectively. Solid waste will not be stored overnight at either facility except for extenuating emergency circumstances such as weather or mechanical breakdown. The intended destination of the waste received at either facility is currently the 121 Regional Disposal Facility (Type 1) owned and operated by NTMWD.

**Receipt of Large Items**

Items that can be classified as large, heavy or bulky include white goods (household appliances), air conditioning units, metal tanks, large metal pieces, etc. These items may be accepted for disposal, however, they may also be accepted for recycling if the likelihood exists for damage to the transfer trailers. If accepted for recycling, these items will be placed in designated roll off container(s) with a maximum capacity of 40 cy each, located in a designated recyclable storage area away from traffic (noted on Attachment II-3-1 and Attachment II-3-2) and removed for recycling when sufficient quantities are accumulated.

4. **General Location Maps [§330.61(c)]**

The General Location maps are included as Attachments II-1, and II-2. These two Attachments along with Attachments II-3-1 and II-3-2 – Facility Layouts, and Attachment II-6 – Wind Rose include the information requested in 30 TAC §330.61(c). See
Appendix II-C for proximity to archeological sites, historical sites and sites with exceptional aesthetic qualities adjacent to the facility.

5. **Facility Layout Maps [§330.61(d)]**

The Facility Layout Map for the existing facility is included in Attachment II-3-1 and for the proposed facility is included as Attachment II-3-2 and presents the information requested in 30 TAC §330.61(d).

6. **General Topographic Maps [§330.61(e)]**

Appropriate portions of The United States Geological Survey 7½-minute Plano and Garland quadrangle sheets for the area around the facility are included as Attachment II-4.

7. **Aerial Photograph [§330.61(f)]**

An aerial photograph from the US Department of Agriculture (2006) meeting the requirements of 30 TAC §330.61(f) is included as Attachment II-5.

8. **Land-use Map [§330.61(g)]**

Land-use Maps and Zoning Maps are included in Appendix II-H - Land Use Analysis.

9. **Impact on Surrounding Area [§330.61(h)]**

Additional detailed information related to the requirements of §330.61(h) is included in the Land Use Analysis Report included as Appendix II-H.

9.1. **Zoning**

The land within all phases of the permit boundary is zoned R-1800-M (residential), by the City of Richardson. The City has determined that the use of the property as a transfer station is a permitted activity as zoned, and that rezoning or special permits are not required.

In April 2007 NTMWD met with the City of Richardson to determine if the proposed transfer station site was compatible with existing zoning for the property and surrounding property. In a response from the City of Richardson Director of Development Services, it was confirmed that the use of this property for a transfer
station was a permitted activity as currently zoned and no zoning change was necessary. A copy of this correspondence is included in Appendix II-G.

Subsequent to the zoning determination, on February 17, 2009, the NTMWD submitted an application for a site development permit to the City of Richardson Planning and Zoning Department for a transfer station on this site. On March 17, 2009 the City of Richardson issued a Memorandum of approval for the site development and landscaping plan of the facility zoned as R-1800. A copy of this Approval is included in Appendix II-G. Subsequent to that, the City issued an approval of the remaining portions of the Site Development Permit for a transfer station facility on the site. A copy of this approval is also included in Appendix II-G.

Before any building permits are issued by the City for construction, it will be necessary for NTMWD to present construction plans for review and final approval by the City related to current building codes.

The zoning immediately to the north, east, and south of the site is also R-1800-M, though it is used as a golf course and a park. The zoning immediately west (Owens) and southwest (vacant) of the site is I-M(1) (industrial).

9.2. Land Use

Land use within one mile of the permit boundary is specifically characterized as follows:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Acres</th>
<th>Percentage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential-Single Family</td>
<td>843</td>
<td>36%</td>
<td>2542 units</td>
</tr>
<tr>
<td>Open</td>
<td>589</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>408</td>
<td>18%</td>
<td>6 parks</td>
</tr>
<tr>
<td>Office/Commercial</td>
<td>395</td>
<td>17%</td>
<td>84 establishments</td>
</tr>
<tr>
<td>Quasi-Public</td>
<td>90</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Residential-Multi-Family</td>
<td>8</td>
<td>&lt;1%</td>
<td>335 units</td>
</tr>
<tr>
<td>Total, one mile</td>
<td>2,333</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Appendix II-H
9.3.  **Growth trends**

Generally, the direction of suburban Dallas growth is to the north of Richardson, in the communities of McKinney, Frisco, Allen and Plano. The population growth within the City of Richardson is leveling out.

Within five miles of the permit boundary, no household growth is expected to occur southeast of the permit boundary, nor northwest, through the year 2030. Most household growth within five miles will occur four to five miles northeast of the permit boundary, in southeast Plano and east Richardson.

9.4.  **Proximity**

As of May 2011, there are 2877 residences within one mile of the permit boundary, 88% of which are single family. The most proximate residence is approximately 625 feet north of the permit boundary, on Braeburn Drive as shown on Figure LU-3 in Appendix II-H.

There are an estimated 84 commercial structures (primarily office and retail) within one mile of the permit boundary. The most proximate business establishment is a manufacturing facility (Owens Country Sausage, Inc.), 100 feet west of the permit boundary as shown on Figure LU-3 in Appendix II-H.

Within one mile of the permit boundary, there are seven churches, two cemeteries, and one licensed day care center. There are no schools within one mile of the permit boundary. The proximity to historic structures and sites, archeologically significant sites and sites with exceptional aesthetic quality within one mile of the facility are shown in Appendix II-C.

9.5.  **Wells**

The Texas Water Development Board (TWDB) records document the existence of an industrial water supply well at the Owens Country Sausage Inc. located immediately west of transfer station. The well is owned and used by Owens Country Sausage, Inc. and is approximately 600 feet from the proposed Transfer Station Permit boundary. It is designated as state well No. 3303202.

There are no known water wells within 500 feet of the proposed facility.
10. Transportation [§330.61(i)]

10.1. Adequacy of Roads

Primary access to the site will be along N. Plano Road (concrete, 6 lane divided thoroughfare) and E. Lookout Drive (asphaltic concrete, 4 lane divided roadway). Other roadways within one mile of the facility that provide access to Plano Road and Lookout Drive are Renner Road, Greenville Avenue, Campbell Road, and U.S. 75. This has been the primary access to the site throughout its greater than 30 years of operation. A field study was conducted during August-October, 2011 to note roadway conditions and intersection design for roadways which could be used by vehicles accessing the transfer station. This information, combined with the roadway capacity analysis, was utilized to assess the availability and adequacy of the area roadway network. A summary of the data collected and the analysis performed by HDR Engineering, Inc. (HDR) is presented in Appendix II-I - Transportation Study.

The Conclusions and Recommendations prepared by HDR concerning the impact of the proposed permit amendment for the Lookout Drive Transfer Station on the local transportation system serving the site are also included in Appendix II-I and are presented as follows:

- None of the main access roadways within one mile of the site have known weight restrictions other than the maximum legal weight limit of 80,000 lbs. Loaded vehicles accessing the facility are not expected to exceed this maximum legal load limit of 80,000 lbs.
- Roadway improvements currently planned or under construction within the study area include construction of right-turn lanes on the US 75 frontage roads.
- Based on the roadway capacity analysis, all main access roadways within one mile of the site will operate at acceptable levels of service (LOS), assuming roadway improvements noted in this report.
• As detailed in Table II.C-16, transfer station traffic accounts for a small percentage of the existing overall roadway capacity on each of the study area roadways during the observed peak hour.

• As detailed in Tables II.C-20 and II.C-21, under 2035 projected traffic conditions, the transfer station traffic will account for a small percentage of the overall roadway capacity on each of the study area roadways during the observed peak hour for each assumed waste processing level for the facility.

• Based on the intersection capacity analysis, all intersections with the exception of N. Plano Road with E. Renner Road will operate at acceptable levels of service under 2035 forecasted conditions, with 750 tons or 1500 tons of waste processed daily. The intersection of N. Plano Road with E. Renner Road will operate at LOS E in year 2035 in the AM peak period with or without the addition of transfer station vehicles. The proposed amendment to the permit for the transfer station does not result in unacceptable traffic operations.

Based on the information presented previously, there are no existing or future restrictions on the main access roadways within one mile of the site that would preclude safe and efficient operations for transfer station vehicles and other traffic in the area.

Improvements will be made to the site entrance from E. Lookout Drive as a part of the construction of the Proposed Facility. These improvements were presented to the City of Richardson for their approval as part of the Site Development Permit process. The City has approved these proposed entrance improvements.

The on-site roadways will be subject to primarily truck traffic, and are designed to support this traffic and provide long term life. The on-site roadways are designed for one-way traffic, where possible, and will be constructed of reinforced concrete or asphalt. Adequate turning radii are provided for the roadways, and a minimum one-way road width of 20 feet and a minimum two-way road width of 22 feet 10 inches will be provided to accommodate collection vehicle and transfer truck traffic. At the proposed facility, all transfer station vehicle traffic (citizens, collection vehicles and
transfer vehicles) will be combined into a single exit lane when leaving the transfer facility site and exiting on to Lookout Drive. All roadway designs were submitted to the City of Richardson and approved as a part of the site development permit process.

Access to the site will be controlled by a gate at the property entrance and by appropriate site fencing. All transfer station heavy equipment for the proposed facility will be secured within the transfer building at night, and the transfer station building secured.

The Texas Department of Transportation (TxDOT) has been made aware of this permit amendment, as evidenced by the coordination letters included in Appendices II-E and II-I. Transfer station staff is required by the TCEQ to provide daily litter inspection and any required cleanup on roads used to access the site, within two miles of the site.

There are no airports within 6 miles of the site. Although coordination with the Federal Aviation Administration is not required for a transfer station, a coordination letter, included in Appendix II – F was sent to the Federal Aviation Administration.

11. **Geology and Soils** [§330.61(j)]

The transfer station is located within the city limits of Richardson in Collin County. The site lies on the Austin chalk formation. Based upon the Natural Resources Conservation Services (formerly the Soil Conservation Service) Map No. TX085 dated October 21, 2004, the surface soil at the site is composed of approximately 90% of Altoga Silty clay and 10% of Houston Black Clay. A geotechnical investigation will be performed prior to foundation design to adequately design the structural components of the facility.

12. **Groundwater and Surface Water** [§330.61(k)]

**Groundwater**

The depth of the groundwater in the site area was ascertained using the water level data for the well at Owens Country Sausage, Inc. found at the United States Geological Survey website. The approximate depth of groundwater is 260 feet below grade. Prior
to design, the geotechnical investigation will determine the presence of any additional subsurface moisture that may affect the structural design of the facility.

There are no known sample points and no known evidence of contaminated groundwater in the vicinity of the proposed transfer station.

**Surface Water**

Spring Creek is located north of the transfer station and flows to the east and southeast. The golf course to the northeast and southeast of the site has various water hazard ponds associated with it. These ponds will not be affected by the Transfer Station as they are across Spring Creek.

Groundwater and surface water contamination by process water and wash water will be prevented by utilizing an approved wastewater treatment system in accordance with Texas water quality regulations and requirements and will not be allowed to discharge the site as stormwater. The process and wash water will be collected on site, directed through a sand/grease trap and discharged into the City of Richardson sanitary collection system and treated by the NTMWD, currently at the Rowlett Creek WWTP. The WWTP facility is designed and operated to comply with applicable Texas Pollutant Discharge Elimination System (TPDES), stormwater permitting requirements and the Clean Water Act §402 as needed. The existing site has an active TPDES Stormwater Permit (No. TXR05U173). The applicant certifies that it will obtain any required changes to the existing TPDES permit to comply with TPDES requirements prior to construction.

13. **Abandoned Oil and Water Wells [§330.61(l)]**

There are no known or identified existing or abandoned oil, natural gas or water wells located on-site. A water well has been identified west of the site on the Owens Country Sausage, Inc. property. This well is identified by the Texas Water Development Board Groundwater Database Reports for Collin County, Texas as owned by Owens Country Sausage and is registered as State Well Number 3303202, Lat. 32° 59’ 11, Long. 96° 64’ 52”.
14. **Floodplains and Wetlands [§330.61(m)]**

**Floodplains**

Floodplain information referenced in this Section can be found in Appendix II-A. Based on the Flood Insurance Rate Map (FIRM) No. 48443C0205J (Updated August 23, 2001) included as Appendix II-A, Exhibit 4 the 100 year flood plain line passes through the north east corner of the site property line. No construction is proposed in the area within the flood plain.

However, as per a June 2, 2009 update included as Appendix II-A, Exhibit 2 to the FIRM maps, two portions of Lot 2 (labeled Tract 1 and Tract 2) were shown to be in the Special Flood Hazard Area (SFHA) as delineated on FIRM No. 48085C0505 J, Panel 505 of 600 for Collin County, Texas and Incorporated Areas. Tract 1 lies approximately north of the existing fire training area. Tract 2 lies approximately in the remediated and abandoned City of Richardson Police Department gun firing range.

Based on more accurate survey data performed by Ringley and Associates, Inc. dated April, 2008 it was determined that the SFHA had been incorrectly mapped on the property. At the request of the City of Richardson, NTMWD sent a request (dated Feb 18, 2010) for a Letter of Map Amendment (LOMA) to the Federal Emergency Management Agency (FEMA) to remove a portion of Lot 2, Block A from the SFHA. On July 27, 2010 FEMA sent an approval letter (Case No. 10-06-2495A) accepting the flood plain re-delineation on Tract 1 (old fire training area) of the site. Re-delineation for Tract 2 (old gun firing range) was not accepted. FEMA determined that Tract 2 (old firing range) could not be removed through the LOMA process due to “intervening high ground”.

At the request of the City, on May 6, 2010 NTMWD submitted a Conditional Letter of Map Revision Based on Fill (CLOMR-F) for a portion on Spring Creek (Tract 2-old gun firing range). On July 8, 2010 FEMA sent an approval letter (Case No. 10-06-2307C) removing Tract 2 conditionally from the SFHA. Once the proposed grading has been completed, NTMWD will be able to submit a Letter of Map Revision based on Fill (LOMR-F) per the as-built conditions.
Based upon these FEMA approvals and the most current FIRM (June 2, 2009), the area for development of the proposed facility will not be within the 100 year flood plain.

Wetlands

Based upon the “National Wetlands Inventory” Map provided by the U.S. Fish and Wildlife Service there are no wetlands within the permit boundary of the proposed Lookout Drive Transfer Station. This Map was obtained from the U.S. Fish and Wildlife Service website and is provided in Appendix II-B. Additional information concerning wetland delineation is also included in a report provided in Appendix II-B. The conclusions of this report are that no wetlands, as defined by the USACE, TCEQ or 30 TAC §330.3 occur in the project area.

15. **Endangered or Threatened Species [§330.61(n)]**

According to the United States Fish and Wildlife Service (USFWS) and the Texas Parks & Wildlife Department (TPWD), 14 threatened or endangered plant and animal species are listed as potentially occurring in Collin County. A detailed discussion of threatened and endangered species for the project has been included in a report prepared by CP&Y, Inc. and is included in Appendix II-B. The conclusion presented in this report is that neither the construction nor the operation of the proposed project is likely to adversely affect the state and federally listed endangered or threatened species of Collin County.

Also, please refer to the correspondence with the USFWS and the TPWD also included in Appendix II-B.

16. **Texas Historical Commission Review [§330.61(o)]**

The Texas Historical Commission has documented compliance with Natural Resources Code §191 and has determined that no historical properties will be affected by the construction of the Lookout Drive Transfer Station and no additional surveys are required. Correspondence with the Texas Historical Commission is provided in Appendix II-C.
17. **Council of Governments and Local Government Review [§330.61(p)]**

Parts I and II of this Permit Amendment Application were submitted for review by the North Texas Council of Governments as evidenced by the attached letter included in Appendix II-D. A copy of the response from NCTCOG will be included in Appendix II-D upon receipt. No local governments requested a review letter for compliance with their local solid waste management plan.
27 September 2011

Mr. Mark Denton  
Texas Historical Commission  
P.O. Box 12276  
Austin, Texas 78711-2276  

Dear Mr. Denton:

SWCA Environmental Consultants (SWCA) conducted an Archeological Resources Constraints Analysis, site visit and Non-Archeological Historic Resource Survey and National Register of Historic Places (NRHP) eligibility analysis for the proposed Lookout Drive Transfer Station, 1601 East Lookout Drive, Richardson, Collin County, Texas. The proposed project involves the relocation and expansion of a solid waste transfer station. The project area for the proposed building is currently in use as a transfer station, a fire training facility and an abandoned police firing range. No federal funds are involved in this project.

The cultural resources constraints analysis identified no previously recorded archaeological sites within or immediately adjacent to the proposed project area. There are four known Official Texas Historic Marker (OTM), Recorded Historic Texas Landmark (RTHL), cemeteries and/or NRHP-eligible historic properties within a one-mile radius of the project area. A review of soils and aerial photographs suggests the project area has little potential for the occurrence of archaeological resources.

An SWCA architectural historian visited the project area (see Figure 1) on 26 July 2011 to conduct a historic resource survey of the project area and adjacent properties. In addition to the resources identified in the constraints analysis, one mid-century modern resource was identified directly to the west of the project area. This NRHP-eligible resource is the headquarters of the Owens Sausage Company (see Figure 3).

SWCA Inc. recommends that it is not necessary for the project area to be subjected to a cultural resources survey. Your office has already concurred with this recommendation in correspondence dated 5/5/2010 (see Figure 4a and b, pages 15-17). SWCA recommends that the proposed construction of the new transfer station may proceed without any additional cultural or historic resource surveys.

Sincerely,

Anna Mod  
Historic Preservation Specialist  

Enclosure: Report with attachments
TABLE OF CONTENTS

Definition of Study Area............................................................................................................................... 1

Regulatory Framework ................................................................................................................................. 1

Methods
   Background Literature Review ........................................................................................................... 1
   Field Methods ........................................................................................................................................ 2
   Non-Archeological Historic Resource Significance Requirements ............................................... 2

Historic Context ............................................................................................................................................ 3

Results - Archeological Constraints Analysis
   Background Review ......................................................................................................................... 4
   Soils ....................................................................................................................................................... 4
   Previous Investigations ....................................................................................................................... 4
   Previously Recorded Sites ............................................................................................................... 4

Results – Non-Archeological Historic Resource Survey
   Buildings ............................................................................................................................................. 6
   Structures .......................................................................................................................................... 7
   Objects and Site ............................................................................................................................... 8

NRHP Analysis ............................................................................................................................................. 8

NRHP-Eligible Resources Identified During the Field Work................................................................. 8

Other Sites with Exceptional Aesthetic Qualities Identified During the Field Work ...................... 9

Summary and Recommendations
   Archeological Resources .................................................................................................................. 9
   Non-Archeological Historic Resources and Effects of Proposed Undertaking on
   Historic Properties ............................................................................................................................ 10

FIGURES

1. Project Area......................................................................................................................................... 12
2. Background Review ........................................................................................................................... 13
3. Historic Resource Survey .................................................................................................................. 14

4a. Texas Historical Commission concurrence letter (5/5/2010) ..................................................... 15
4b. Texas Historical Commission concurrence letter:
   Attachment: Location Map (5/5/2010) .......................................................................................... 17

Photographs ............................................................................................................................................ 18

Appendix A – Resumes .............................................................................................................................. 32
ARCHEOLOGICAL RESOURCE ANALYSIS AND NON-ARCHEOLOGICAL HISTORIC RESOURCE SURVEY WITH NATIONAL REGISTER OF HISTORIC PLACES (NRHP) ELIGIBILITY ANALYSIS OF THE PROPOSED NORTH TEXAS MUNICIPAL WATER DISTRICT LOOKOUT DRIVE TRANSFER STATION, COLLIN COUNTY, TEXAS

DEFINITION OF STUDY AREA

The project area is located at 1601 East Lookout Drive, Richardson, Collin County, Texas. The project area is depicted on the Garland, Texas 7.5-minute topographic quadrangle map (Figure 1) and includes the existing transfer station, a fire training facility and an abandoned police firing range. The project area is approximately 9.2 acres.

REGULATORY FRAMEWORK

This project comes under the purview of TCEQ regulation 30 TAC §330.61 which requires compliance with Natural Resources Code, Chapter 191, The Antiquities Code of Texas. Specifically:

- 30 TAC 330.61(c)(12) – accurately show proximity to “archaeological sites, historical sites, and sites with exceptional aesthetic qualities adjacent to the facility”
- 30 TAC 330.61(h)(4) – show the proximity to “historic structures and sites, archaeologically significant sites, [and] sites with exceptional aesthetic quality within one mile of the facility”
- 30 TAC 330.61(o) – the owner or operator shall submit a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.”

METHODS

BACKGROUND LITERATURE REVIEW

SWCA performed a constraints analysis/background literature review to determine if the project area had been previously surveyed for cultural (archeological) and historic (above ground) resources. This review included gathering information on any cultural resource (archeological) sites recorded within or adjacent to the project area. To conduct this review, an archaeologist reviewed the Texas Historical Commission’s Archeological Site database (ATLAS). This source provides information on the nature and location of previously conducted archaeological surveys and previously recorded historic resources. This source also provided information on any National Register of Historic Places (NRHP) listed properties, Recorded Texas Historic Landmarks (RTHL), State Archeological Landmarks (SAL), cemeteries and Official Texas Historic Markers (OTM). After the background review, SWCA conducted field work and a Historic Resource Survey of the project area as well as visited all identified NRHP, RTHL, SAL and/or OTMs properties with known above ground resources that were identified in the background review.
Although this proposed project is not subject to the National Historic Preservation Act of 1966, as amended, SWCA used standard and accepted professional historic preservation methodology of identifying, documenting and analyzing NRHP eligibility for the project area and documented any potential NRHP-eligible properties observed during the field effort.

**FIELD METHODS**

During the historic resource survey fieldwork, structures, buildings, objects, and sites within the project area itself and those within a one-mile radius that were visible without trespassing were analyzed for age, physical integrity and historical significance. All resources with the potential to have been built prior to 1965 were photographed at an oblique angle, if possible, from the roadway or public access using a digital camera, and character-defining features and landscape conditions were noted. An SWCA architectural historian made the evaluations on the property’s age, integrity, and significance. Each property was photographed, and data such as location, address (if possible), property type, form or plan, stylistic influence, construction date and NRHP recommendation was noted in the field. Properties clearly built after 1965 were not photographed during this process unless their parcel boundary included earlier resources. Additionally, those historic resources identified in the constraints analysis/background review with known above ground resources were visited and photographed.

**NON-ARCHEOLOGICAL HISTORIC RESOURCE SIGNIFICANCE REQUIREMENTS**

The eligibility criteria for listing in the National Register of Historic Places (NRHP) includes sites, districts, buildings, structures, and objects that are at least 50 years old and conform to at least one of the following criteria (taken from 36 Code of Federal Regulation [CFR] Part 60):

(A) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(B) that are associated with the lives of persons significant in our past; or

(C) that embody distinctive characteristic of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) that has yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily cemeteries, birthplaces, or graves of individual figures, properties owned by religious institutions, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the NRHP. However, exceptions are made to those properties that meet special requirements, called Criteria Considera-
tions. These considerations, in addition to the eligibility criteria above, must be met for these properties to be eligible for inclusion to the NRHP.

The eligibility criteria above also state that a property must be “significant” in order to be NRHP-eligible. In order to determine what “significant” means, the property’s place in local, state, or national history must be understood through its historic context. It is not enough for a property to be interesting in and of itself, it must also be a representative of a broader pattern of history—whether it is an event or person that changes existing patterns of society, a style or form of technology that changes the way people saw and did things, or something that provides valuable information about our own history that would otherwise be lost. If the property can be linked with a historic context that describes an important aspect of history, whether it is the history of a local community or a sign of nationwide change, the property is considered significant, and may be eligible for listing in the NRHP.

If a property is more than 50 years old and is significant, the final aspect to be evaluated is integrity. The property must be able to convey its significance, i.e., to adequately represent in a physical way what makes the property special. When the significant aspect of the property is physical (such as an architectural form or technological innovation), the evaluation of the property is easier; it must retain those attributes that make it significant, such as design, materials, and workmanship. However, if the association with history is an idea, person, or event, the physical representation of significance is more abstract. The property must convey to those who see it the same environment (time and place) where the significant event happened or person lived/worked. Aspects of integrity such as location, setting, feeling, and association are very important to the significance of these types of properties in order to provide a sense of place and time. Properties that are eligible for the historic information they can provide, usually prehistoric archaeological sites or historic properties that have little or no documentary information, primarily require feature integrity (location, design, and materials) best capable of providing the desired information.

**Historic Context**

Richardson is located in north central Texas on US Highway 75 in northern Dallas and southern Collin Counties. It is a residential and electronic manufacturing suburb ten miles north of downtown Dallas. The general area was first settled by the Peters Colony in the 1840s and 50s who were drawn to its grasslands and natural springs. The early community was called Breckinridge. It was largely abandoned when bypassed by the Houston and Texas Central Railroad in 1873 when Richardson was founded along the new railroad alignment on 101-acres of land donated by William J. Wheeler and Bernard Reilly. The exact origin of the town name is not known yet the most widely accepted locally is the town was named for one of two railroad men: A. S. Richardson, a secretary at H&TC; or, E. H. Richardson, a contractor who built the Houston and Texas Railroad from Dallas to Denton. The town thrived after the arrival of the railroad and by 1881 boasted general stores, druggists, doctors, cotton gins and churches. In 1904 the town was connected to Dallas and Sherman via the Interurban electric railroad in the early twentieth century. The first newspaper, the Richardson Register, appeared in 1901 joined by a weekly paper, the Richardson Echo, in 1914.
A new eight-room brick school house opened in 1914 replacing an earlier frame building. The Richardson Fair, an annual agricultural and livestock event, was established in 1922 and continued until the 1970s. The town incorporated in 1925 with a commission form of government. Development in the general area expanded after World War II yet Richardson remained largely a farming community until the 1950s when technological industries began to locate there inspired by the expansion of U.S. Highway 75 that began to transform the town into a suburb of Dallas. Texas Instruments opened near the town border in the early 1960s and the community began to be known as the “electronic suburb” as commercial business and industrial parks replaced cotton fields. In 1964 the Southwest Center for Advanced Studies opened in Richardson and became the University of Texas at Dallas five years later. By 1970 the population had increased to 43,900. The area attracted telecommunications firms and by the late 1980s the “electronic suburb” was replaced with “Telecom Corridor.” In 2000 the population was 91,802. (Lisa C. Maxwell, “RICHARDSON, TX,” Handbook of Texas Online (http://www.tshaonline.org/handbook/online/articles/hdr01), accessed August 18, 2011. Published by the Texas State Historical Association.

RESULTS – ARCHEOLOGICAL CONSTRAINTS ANALYSIS

BACKGROUND REVIEW

SOILS

There is only one soil series within the project area. This is the Houston Black Series, which are very deep, moderately well-drained, very slowly permeable soils that formed from weakly consolidated calcareous clays and marls of Cretaceous Age. These soils are found on nearly level to moderately sloping uplands (USDA 2011).

PREVIOUS INVESTIGATIONS

The background literature review revealed that the project area has not been previously surveyed for archaeological resources. There have been four previous cultural (archaeological) resources investigations located within one mile of the project area. These include: an unidentified survey of Spring Creek between I-75 and FM 5; a 1996 survey for Dallas Area Rapid Transit (DART); a 2005 reconnaissance survey of I-75; and, a 2010 survey of two parcels for the North Texas Municipal Water District.

PREVIOUSLY RECORDED SITES

A review of the online database, Texas Historic and Archeological Sites Atlas (ATLAS), identified that there are no previously recorded archeological sites located within or immediately adjacent to the currently proposed project area. There are four historic sites located within a 1 mile radius of the project area:

- Site 41COL83 is the remains of the Jacob Routh Family Homestead and its two associated family cemeteries. This site was recorded during 1991 for the Spring Creek Nature
Area and in a 1996 survey for DART. The site was recommended as having unknown potential for inclusion in the National Register of Historic Places by the archeologists. SWCA reviewed the Archeological Survey of the North Central Corridor, Dallas Area Rapid Transit Light Rail System, Dallas and Collin Counties, Texas (Green, Melissa, et al, 1996, Texas Antiquities Permit #1696) and determined that only two above ground resources are extant on the property: a springhouse and field laborers cabin. Other significant above ground resources, such as the farmhouse and associated outbuildings, are no longer extant. Therefore, this site was not visited during the field work as it is not NRHP eligible under Criteria A, B or C due to integrity loss.

- Site 41DL372 is a historic farmstead recorded during the 1996 DART survey. This site is located between Glenville Ave. and Lookout Drive along an unnamed tributary of Spring Creek. This site was also recommended as having potential for inclusion on the NRHP for its archeological potential. There are no remaining above ground resources at this site and therefore SWCA did not visit this site during the field work as there are no above ground resources eligible for the NRHP.

- The Hill-Robberson House is located in the 2400 block of Plano Road in Richardson, Dallas County (Marker #6738). The house is a Recorded Texas Historic Landmark (RTHL). Early Richardson settler A. H. Hill built this house ca. 1887 at 206 Sherman Street on what had been railroad property. In 1902 it was purchased by Margaret A. Robberson for her daughter Virginia Bell Robberson (1870-1940). Known as “Miss Belle,” Virginia taught school in the house for almost forty years. The Victorian-era residence which features a distinctive gabled roof and decorative millwork was moved to its present site on Plano Road in 1972. It was designated a RTHL in 1982 and is owned and managed by the Junior League of Richardson, TX. The house is surrounded by a low picket fence and is located on a small farm that is open for scheduled tour groups for educational and historic tours. As an RTHL listed property, the house is considered NRHP eligible.
A 1982 Neighborhood Survey identified a “farmhouse” complex at 2005 North Cliffe, in Richardson, Dallas County. At that time, the property included a c. 1935 house and farm complex. Neighborhood Surveys are conducted to identify potential NRHP-eligible properties and as this house was identified it is considered NRHP-eligible. Field work confirmed that this house was extant, in good condition and in use as the Richardson Woman’s club (RWC) although its associated farmland is incorporated into a golf course. Additional research found that at the time of the 1982 Neighborhood Survey the property was in use as a weekend country home or gentlemen’s farm. The City of Richardson acquired the house and former farmland, along with additional acreage that became the adjacent Sherrill Park Golf Course in 1969. In September of that year, the City of Richardson named the Richardson Woman’s Club, organized in 1955 and incorporated in 1962, as agent for the care of the house. In 1987, Founders Hall was built on the property, paid for largely by profits from the sale of *The Texas Experience Cookbook*, a Richardson Woman’s Club publication.

**RESULTS**

**NON-ARCHEOLOGICAL HISTORIC RESOURCE SURVEY**

A SWCA architectural historian (for resumes, see Appendix A) conducted a non-archeological historic resource survey on 26 July 2011 in order to identify, document and analyze the build-
ings, objects, sites and structures within the immediate project area. SWCA found six buildings, three structures, one object and two sites, each identified in the following table.

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Identification</th>
<th>Estimated Date built</th>
<th>NRHP-eligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Fire Training Center</td>
<td>Building</td>
<td>c. 1975</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>Fire Practice Tower</td>
<td>Structure</td>
<td>c. 1965</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>Burn House</td>
<td>Building</td>
<td>c. 1965</td>
<td>No</td>
</tr>
<tr>
<td>D</td>
<td>Large Practice Structure</td>
<td>Structure</td>
<td>c. 2001</td>
<td>No</td>
</tr>
<tr>
<td>E</td>
<td>Flagpole and Tank</td>
<td>Object</td>
<td>c. 1975 (flagpole)/c. 1940 (tank)</td>
<td>No</td>
</tr>
<tr>
<td>F</td>
<td>Open-air Shed</td>
<td>Building</td>
<td>c. 2000</td>
<td>No</td>
</tr>
<tr>
<td>G</td>
<td>Shooting Range</td>
<td>Site</td>
<td>c. 1975</td>
<td>No</td>
</tr>
<tr>
<td>H</td>
<td>Shed (two)</td>
<td>Building</td>
<td>c. 1990</td>
<td>No</td>
</tr>
<tr>
<td>I</td>
<td>Maze Building</td>
<td>Building</td>
<td>c. 1965</td>
<td>No</td>
</tr>
<tr>
<td>J</td>
<td>Small Practice Structure</td>
<td>Structure</td>
<td>c. 1995</td>
<td>No</td>
</tr>
<tr>
<td>K</td>
<td>Berm</td>
<td>Site/Designed Landscape</td>
<td>c. 1965</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Transfer Station</td>
<td>Building</td>
<td>c. 1975</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 1: Inventory of resources, Fire Practice Center

**BUILDINGS**

The survey identified six buildings within the project area. The earliest buildings within the project area include the Fire Practice Tower (ID B), the Burn House (ID C), the Maze Building (ID I) and the earthen Berm (ID K), an engineered landscape to protect the site from flooding from nearby Spring Creek. The Mayfield Russell Fire Training Center building (ID A) dates to c. 1975 and is a one-story, brick clad building with an obtuse gabled roof on a slab foundation. The floor plan is irregular and the building serves as administrative office, classroom and meeting spaces for the fire department training academy. The Burn House (ID C) is a single story, side-gabled, concrete masonry unit (CMU) building on a concrete slab foundation. Like the Fire Practice Tower, the Burn House serves an educational purpose for training firefighters. Metal doors cover the doorways and metal, single-panel shutters cover the window openings. The open-air shed (ID F) is a single-story, side-gabled open-air building. A short retaining wall of railroad ties surrounds three sides of the building, leaving only the primary elevation fully open. There are two picnic tables under the building canopy. There are two sheds in the southwest corner of the Shooting Range: the first is a front-gabled, metal-roofed building; and, the second has a shed-roof. The Maze Building (ID I) is a two-story, side-gabled building with CMU veneer over clapboard siding and a metal exoskeleton. From the exterior the building appears to be only one-story. The interior is designed with four-foot ceiling heights so that firemen must crawl inside. The building has exposed rafter rails at the eaves and no windows. The rafter tails coupled with its gabled form, wood frame construction and clapboard siding evidence an earlier construction date and it is possible this building was moved onto the site and repurposed.

**STRUCTURES**

The Fire Practice Tower (ID B) is a three-story, metal framed structure with brick veneer covering the full first story and a single elevation of the second and third stories. The plan
is rectangular with one room per floor. The Fire Practice Tower offers firefighters-in-training space to practice rescue and fire control situations. The Large Practice Structure (ID D) is a two-level plywood structure used for training purposes. The Small Practice Structure (ID J) is a wood structure composed of plywood and 2x4s. It is connected to a metal tank via insulated metal tubing. This structure is another training device, used to simulate the conditions inside a silo explosion and a situation where a firefighter would need to crawl to reach and rescue a victim. Both of these wooden structures have been repaired and rebuilt over time.

**OBJECTS AND SITES**

The Flagpole and Tank (ID E) are classified as objects and are located in front of the Mayfield Wright Fire Training Center building. According to an on-site interview, the Tank will be moved to the new Fire Practice Center. The Shooting Range (ID G) is a sunken grass covered area surrounded by a tall, man-made earthen berm. There is an opening on the eastern side of the berm that provides access to and from the range. There is some recreational and physical education equipment on the grass yet the Shooting Range is largely abandoned. The Berm (ID K) is an engineered landscape feature and is horseshoe-shaped and surrounds the Shooting Range (ID G) and continues to the west and north along the southern Spring Creek bank to protect the entire site from flooding. The berm is categorized as a site and its height varies to up to twenty feet tall at its highest point and covered with mown grass.

**NRHP ANALYSIS**

The Fire Training Center represents typical development patterns with the placement of civic support facilities outside of residential areas for training for fire support services. The earliest buildings and site (the Berm) date to c. 1965 as the area shifted from agricultural to suburban land use. This is concurrent to Richardson's transformation from a small farming community into a suburb of Dallas when electronics companies began to locate here. The fire training complex was expanded in c. 1975 with the addition of the Mayfield Wright Fire Training Center building (ID a), the flagpole and the Police Shooting Range (ID G). The Transfer Station was added circa 1975. The buildings, structures, objects and sites are all utilitarian in style and do not demonstrate any planning, architectural or engineering innovation or high-style design elements. There are no historic persons associated with the property or its current use. SWCA recommends the Mayfield Wright Fire Training Center as NOT ELIGIBLE for NRHP listing.

**NRHP-ELIGIBLE RESOURCES IDENTIFIED DURING THE FIELD WORK**

Adjacent and to the west of the project area is the Owens Sausage Company. This building is a one-story, mid-century modern building that faces south at 1403 East Lookout Drive and opened in 1963. SWCA will recommend the Owens Sausage Headquarters Buildings as NRHP-eligible under Criterion C, Architecture, as a good example of the formalist style of architecture that was popular in the post-World War II era until the early 1970s.
OTHER SITES WITH EXCEPTIONAL AESTHETIC QUALITIES IDENTIFIED DURING THE FIELD WORK

SWCA did not encounter or observe any sites “with exceptional aesthetic quality” within the project area or surrounding one-mile radius. The project is surrounded by suburban development along Plano Road to the west and golf courses and municipal parks to the north and southeast. The proposed project has a defined footprint of the area where the current transfer station and fire practice area is located.

SUMMARY AND RECOMMENDATIONS

ARCHEOLOGICAL RESOURCES

SWCA conducted an archaeological constraints analysis for a proposed NTMWD project at 1601 East Lookout Drive, in the City of Richardson, Collin County, Texas. The purpose of the constraints analysis was to gather available information on previously recorded archaeological surveys, archaeological sites, and historic resources within the project corridor and to assess the potential for the presence of additional cultural resources (see Figure 2).

The background review revealed that the project area has not been previously surveyed for cultural resources. There have been cultural resources surveys within 1 mile of the project area with two archeological sites and two historic resources identified:
• Site 41COL83 is the remains of the Jacob Routh Family Homestead and its two associated family cemeteries located 0.70 miles to the northwest of the project area; and,
• Site 41DL372 is the remains of a historic farmstead located 0.95 miles to the west, southwest of the project area;
• Hill-Robberson House, 2400 block of Plano Road just north of East Lookout Drive, built 1887. Recorded Texas Historic Landmark (RTHL); and,
• Richardson Woman's Club, 2005 North Cliffe, built 1935.

A review of soils and aerial photographs suggests the project area has little potential for the occurrence of archaeological resources. The soil series within the project area is the Houston Black Series, which are very deep, moderately well-drained, very slowly permeable soils that formed from weakly consolidated calcareous clays and marls of Cretaceous Age (USDA 2011). These soils have little potential for the occurrence of archeological resources. In addition, there has been ongoing earthen infrastructure added along Spring Creek (berms) over much of the twentieth century for flood protection.

Therefore, SWCA Inc. recommends that it is not necessary for the project area to be subjected to a cultural resources survey. The Texas Historical Commission has already concurred with this recommendation in correspondence dated 5/5/2010 (see attachment). Therefore, the proposed construction of the new transfer station may proceed without further delay. SWCA will submit this report to Texas Historical Commission in compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.

**Non-Archeological Historic Resources and Effects of Proposed Undertaking on Historic Properties**

SWCA has made a reasonable and good faith effort to identify NRHP-eligible properties within the project area and surrounding neighborhood. Four historic properties were identified during the background review. These are:

• Site 41COL83 is the remains of the Jacob Routh Family Homestead and its two associated family cemeteries located 0.70 miles to the northwest of the project area;
• Site 41DL372 is the remains of a historic farmstead located 0.95 miles to the west, southwest of the project area;
• Hill-Robberson House, 2400 block of Plano Road just north of East Lookout Drive, built 1887. Recorded Texas Historic Landmark (RTHL);
• Richardson Woman's Club, 2005 North Cliffe, built 1935; and,

One NRHP eligible resources was identified during the field effort:

• Owens Sausage Company, 1403 East Lookout Drive, built 1963.

Site 41COL83 is the remains of the Jacob Routh Family Homestead and its two associated family cemeteries. Only two above ground resources are extant on the property: a springhouse and field laborers cabin. Other significant above ground resources, such as the farmhouse and asso-
associated outbuildings, are no longer extant. Therefore, this site is not considered NRHP eligible under Criteria A, B or C due to integrity loss; therefore there are NO HISTORIC PROPERTIES at this site.

Site 41DL372 is a historic farmstead with no remaining above ground resources. There are NO HISTORIC PROPERTIES at this site.

The Hill-Robberson House is located just north of the intersection of Plano Road and East Lookout Drive and is a component of an education farm complex although owned by a separate entity (the Junior League of Richardson). The house is listed as a RTHL and is 0.25 miles west of the proposed project area. The house was moved to this site in 1972 and retains its integrity of design, materials workmanship and feeling. Integrity of location and association were compromised when the house was moved. The surrounding area across Plano Road is typical suburban office low-rise development and thus the integrity of setting has been compromised. The house is in good condition and is well maintained. Additionally, it is well buffered by the Owens Sausage Company building that sits between the project area and this identified historic resource. The proposed undertaking will have NO EFFECT on this historic property.

The farmhouse at 2005 North Cliffe, is 0.67 miles northeast of the proposed project area. The identified historic property retains its integrity of location, design, materials, workmanship, feeling and association. The farmhouse, now in use as the Richardson Woman’s Club, is in good condition and is well maintained. Integrity of setting has been compromised by the surrounding suburban neighborhood and golf course. The building is similarly buffered from the proposed undertaking project area by park space and the golf course. The proposed undertaking will have NO EFFECT on this historic property.

The Owens Sausage Company building is 0.10 miles directly west of the proposed project area. The headquarters building opened in 1963 and is a good example of the formalist style, popular in the post World War II era. The headquarters building faces East Lookout Drive and support industrial sheds are located behind. The proposed undertaking will have NO EFFECT on this NRHP-eligible property.

It is SWCA's opinion that this Archeological Resource Analysis and Non-Archeological Historic Resource Survey of the project area is in compliance with the following regulatory codes:

- **30 TAC 330.61(c)(12)** – accurately show proximity to “archaeological sites, historical sites, and sites with exceptional aesthetic qualities adjacent to the facility”
- **30 TAC 330.61(h)(4)** – show the proximity to “historic structures and sites, archaeologically significant sites, [and] sites with exceptional aesthetic quality within one mile of the facility”
- **30 TAC 330.61(o)** – the owner or operator shall submit a review letter from the Texas Historical Commission documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code.”

Formal concurrence will be via letter from the Texas Historical Commission.
Figure 1. Project Area
Figure 2. Background Review
Figure 3 – Historic Resource Survey
April 7, 2010

Ed Baker
Texas Historical Commission
P.O. Box 12276
Austin, TX 78711-2276

Re: TCEQ Permit Amendment Application; Request for Documenting Compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code at North Texas Municipal Water District Lookout Drive Transfer Station; 1601 East Lookout Drive, Richardson, Texas 75082

Dear Mr. Baker:

The North Texas Municipal Water District (NTMWD) has retained the services of CP&Y, Inc., of Dallas, Texas, to prepare a municipal solid waste permit amendment application for submission to the Texas Commission on Environmental Quality (TCEQ). The transfer station is located in Richardson, Texas (Collin County), as illustrated in the attached figure.

The transfer station was constructed in the mid 1970s by the City of Richardson and the property was conveyed to NTMWD in 1980. NTMWD has a need to replace the existing transfer station with a new facility and has proposed the construction of a new transfer station adjacent to the currently operating transfer station. The location of the proposed transfer station is currently occupied by a fire training facility and an abandoned police firing range. This previously developed area will be demolished and redeveloped for construction of the proposed transfer station. Approval of the application will allow for relocation of the Lookout Drive Transfer Station from its current location.

TCEQ regulation 30 TAC §330.61(o) requires the Texas Historical Commission be contacted for documenting compliance with the Natural Resources Code, Chapter 191, Texas Antiquities Code. There are currently no known areas of historical significance that are in or adjacent to the current transfer station, or the proposed relocation area.

Figure 4a – Texas Historical Commission concurrence letter (5/5/2010)
Ed Baker  
April 7, 2010  
Page Number 2

If you need any further information, please do not hesitate to contact Mr. Jeff Mayfield with NTMWD at the phone number on the letterhead or Mr. Robert Fifarek with CP&Y, Inc. at (214) 638-0500. Kindly provide all written correspondence regarding this matter to NTMWD at the address on the letterhead.

Sincerely,

[Signature]

JAMES M. PARKS  
Executive Director

Attachment: Location Map

cc: Robert Fifarek, P.E., - CP&Y, Inc.  
NTMWD Central File – Lookout Drive TS 9.0

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Figure 4a – Texas Historical Commission concurrence letter (5/5/2010)
Figure 4b – Texas Historical Commission concurrence letter: Attachment: Location Map (5/5/2010)
Photographs
Resources A-K
View towards Transfer Station, 1601 East Lookout Drive, view NE

Detail of signage, 1601 East Lookout Drive

Image: 033
Transfer Station building, 1601 East Lookout Drive, view NW

Resource A, Fire Training Center, east and north elevations, view SW
Resource B – Fire Practice Tower, south and east elevations, view NW  Image: 007

Resource C, Burn House, south and east elevations, view NW  Image: 009
Resource D – Large Practice Structure, N & W elevations, view SW (Resources A & E in background)
image: 013

Resource E – Flagpole and Fire extinguisher
View SW
Image: 014
Resource F – Open-air shed, north and east elevations, view SW

Resource G – Shooting Range, view N
Resource H – Two sheds, view SW

Resource I – Maze Building, north and east elevations, view SW
Resource J – Small Practice Structure, view NW, (Resources F and B in background)  Image: 0023

Resource K – Berm, view NNW towards Spring Creek from break in berm  Image: 0027
Resource K – Berm break, view west towards Shooting Range (Resource G)  

Image: 030
Resumes
Ms. Marek is a Professional Archaeologist with twenty years of archaeology and cultural resources management experience in the continental United States. She has also worked on projects in Mesoamerica, the Caribbean, and the Middle East. Ms. Marek is qualified at state and federal levels to serve and manage large or small survey, testing or excavation projects. She is familiar with federal and state laws regarding cultural resources and she is adept at report production. Ms. Marek is a qualified physical anthropologist, experienced with the Native American Graves Protection and Repatriation Act (NAGPRA), and working with Native American groups.

From September 2001 through December of 2010, Ms. Marek was the Principal Investigator for archaeological and historical investigations at the site of 41AU2, San Felipe de Austin, the Colonial Capital of Texas. These were the first scientific archaeological investigations ever conducted at the site. Research identified the location of colonial homes and businesses, and excavations found intact Colonial deposits. The work demonstrated that portions of the Colonial town site remained intact and that the site was eligible for listing in the National Register of Historic Places.

While working for PBS&J Engineering and Environmental Consultants (August 1998–September 1999) Ms. Marek worked on the Allen Parkway Village Cemetery Relocation Project for the City of Houston Housing Authority. Her responsibilities included supervising the processing of all human skeletal materials and artifacts, and the analysis and documentation of all casket hardware and personal effects. She conducted archival research and completed a report of her findings.

Education / Training
• M.S., Historic Preservation, University of Vermont, Burlington, Vermont, 1996
• B.A., Art History & Latin American Studies, Tulane University, New Orleans, Louisiana, 1986

Registration / Certification
• Secretary of the Interior qualified historic preservation professional and architectural historian
• Historical and Archival Research TxDOT(2.11.1)
• Surveys, Research and Documentation of Historic Buildings, Structures and Objects TxDOT (2.8.1)

Expertise
• Section 106 and NEPA compliance for linear historic resources (historic roads including Route 66)
• Historic resource section of EIS and EA documents
• Historic Preservation consulting
• National Register of Historic Places analysis and nominations
• Investment Tax Credits
• Historic resource surveys and condition assessments
• Materials specifications

Relevant Projects
• Individual and Historic District Listings in the National Register of Historic Places, 20+ projects; Texas
• Rehabilitation tax incentives; preservation specifications, 18+ projects; Texas
• Design Standards; Galveston

ANNA MOD, M.S.
Historic Preservation Specialist
Architectural Historian

Anna Mod is a Secretary of the Interior’s qualified historic preservation professional and architectural historian active in the field since 1993. During her career, she has worked with numerous municipalities, state and federal agencies, architects and developers to identify and support the rehabilitation of historic buildings. She is well versed in compliance regulations on the local, state and federal levels for historic rehabilitation and documentation projects.

Ms. Mod has received additional training in Section 106 and 4(f) compliance, NRHP site evaluations, historic and cultural landscape documentation, and mid-20th century modernist architecture. She has seasoned experience with DOT historic resource surveys, historic building rehabilitation projects and garnering approval from state and federal agencies for Investment Tax Credit projects. Ms. Mod has authored over 20 successful National Register nominations that range from late 19th and early 20th century urban districts, mid-20th century modernist buildings, a center-pivot swing bridge and the majority of the town of Fayetteville, Texas. She has also completed HABS Level II documentation for a 1940s Drive-in theater and a Memorandum of Agreement for Section 106 mitigation.

Ms. Mod taught graduate level historic preservation courses at the University of Houston and Prairie View A&M prior to joining SWCA. Her projects have won awards from the National Trust for Historic Preservation, Preservation Texas, AIA-Houston and the Greater Houston Preservation Alliance. She is published in Texas Architect and Cite magazines and the National Trust for Historic Preservation’s Information Series. She is a contributing author to Buildings of Texas, a forthcoming two-volume book on Texas architecture sponsored by the Society of Architectural Historians. She is one of the co-founders of Houston Mod; a member of the executive committee of The Heritage Society and Texas Dance Hall Preservation, Inc.; a member of the editorial committee of Cite magazine; and, a former member of the Harris County Historical Commission.
Ms. Cynkar is a Secretary of the Interior’s qualified historic preservation specialist and architectural historian with interest in both nineteenth century and mid-century modern architecture. Her work includes award-winning HABS drawings, architectural surveys, National Register nominations, rehabilitation design, and GIS planning for historic resources. Grace Cynkar holds a masters of science in historic preservation from the University of Texas at Austin and a bachelor degree in Art History and English from Rice University.

Ms. Cynkar’s expertise and interests are diverse. She has completed HABS drawings of the Sampson-Nalle House in Austin, TX, performed surveys of mid-century modern architecture in Austin, TX, and completed Recorded Texas Historic Landmark applications for nineteenth century homes in Houston, TX and Liberty, TX. Ms. Cynkar is also interested in the use of Geographical Information Systems both as an organizational and advocacy tool for historic preservation. She pursued this topic in her thesis work concerning the use of GIS for the hazard mitigation of historic resources. In addition to proficiency with GIS, she is also a skilled photographer, graphic designer, and AutoCad draftswomen.
APPENDIX II-E

TEXAS DEPARTMENT OF TRANSPORTATION
COORDINATION
April 7, 2010

Bill Hale, P.E.
District Engineer
Texas Department of Transportation
P.O. Box 133067
Dallas, Texas 75131-3067

Re: TCEQ Permit Amendment Application; Request for Documentation of Coordination for Traffic and Location Restrictions at North Texas Municipal Water District Lookout Drive Transfer Station; 1601 East Lookout Drive, Richardson, Texas 75082

Dear Mr. Hale:

The North Texas Municipal Water District (NTMWD) has retained the services of CP&Y, Inc., of Dallas, Texas, to prepare a municipal solid waste permit amendment application for submission to the Texas Commission on Environmental Quality (TCEQ). The transfer station is located in Richardson, Texas (Collin County), as illustrated in the attached figure.

NTMWD has a need to replace the existing transfer station with a new facility and has proposed the construction of a new transfer station adjacent to the currently operating transfer station. Approval of the application will allow for relocation of the Lookout Drive Transfer Station from its current location.

TCEQ regulation 30 TAC §330.61(i)(4) requires that the Texas Department of Transportation be contacted for coordination of traffic and location restrictions. The access roads and traffic pattern to the proposed transfer station will be unchanged. This letter is to request confirmation that the roadways surrounding the proposed Transfer Station are adequate to accommodate the current traffic volume. The above-referenced location map is included as an attachment for use in identifying the affected roadways.
If you need any further information, please do not hesitate to contact Mr. Jeff Mayfield with NTMWD at the phone number on the letterhead or Mr. Robert Fifarek with CP&Y, Inc. at (214) 638-0500. Kindly provide all written correspondence regarding this matter to NTMWD at the address on the letterhead.

Sincerely,

JAMES M. PARKS
Executive Director

Attachment: Location Map

cc: Robert Fifarek, P.E., - CP&Y, Inc.
NTMWD Central File – Lookout Drive TS 9.0
September 29, 2011

Bill Hale, P.E.
Dallas District Engineer
Texas Department of Transportation
4777 E. Highway 80
Mesquite, TX 75150-6643

Subject: Lookout Drive Transfer Station, Richardson, Texas

Dear Mr. Hale:

The North Texas Municipal Water District (NTMWD) is preparing a permit amendment application for the replacement of the Lookout Drive Transfer Station located at 1601 E. Lookout Drive, Richardson, Texas, 75082. The application will be submitted for review and approval by the Texas Commission on Environmental Quality (TCEQ). The purpose of this letter is to follow-up on NTMWD’s letter of April 17, 2010 which documented coordination with the Texas Department of Transportation consistent with the requirements of the TCEQ’s municipal solid waste regulations, 30 Texas Administrative Code Chapter 330 (30 TAC §330.61(i)(4)), and to provide additional detail regarding the increased waste vehicle traffic volume expected to result from this project.

The site entrance is located on East Lookout Drive, approximately 1,500 feet east of N Plano Rd. The primary access route to the Transfer Station is East Lookout Drive. Enclosed Figure 1 shows the location of the site prepared from Texas Department of Transportation maps. Once TCEQ has issued the permit and NTMWD constructs the new facility, waste vehicle traffic is expected to increase from the current 147 vehicles per day (annual average) to 306 vehicles per day. The peak day waste vehicle numbers will increase from 383 vehicles per day to 612 vehicles per day. As you can see on Figure 2, the new site access road is to be located only a few feet from the existing access road to the current facility. No alterations to the public roads in the area are contemplated.

We appreciate your written acknowledgement of receipt of this letter, and of course, please feel free to contact Mike McInturff or me if you have any questions or comments.

Sincerely,

[Signature]

Leslie D. Pollack, P.E., PTOE
Project Manager

Enclosures
APPENDIX II-F

FEDERAL AVIATION ADMINISTRATION COORDINATION
Attention: Faye Nedderman  
Texas ADO  
Southwest Region  
US Department of Transportation/Federal Aviation Administration  
2601 Meacham Boulevard  
Fort Worth, Texas 76137-4298

Re: TCEQ Permit Amendment Application; Request for Confirmation of Presence or Absence of any Airports Located within Six Mile Radius of North Texas Municipal Water District Lookout Drive Transfer Station; 1601 East Lookout Drive, Richardson, Texas 75082

Dear Ms. Nedderman:

The North Texas Municipal Water District (NTMWD) has retained the services of CP&Y, Inc., of Dallas, Texas, to prepare a municipal solid waste permit amendment application for submission to the Texas Commission on Environmental Quality (TCEQ). The transfer station is located in Richardson, Texas (Collin County), as illustrated in the attached figure.

NTMWD has a need to replace the existing transfer station with a new facility and has proposed the construction of a new transfer station adjacent to the currently operating transfer station. Approval of the application will allow for relocation of the Lookout Drive Transfer Station from its current location. All waste-related transfer station activities will be confined within the proposed transfer station building. Hence, the operations at the site will not contribute to or pose any bird hazard to aircrafts.

TCEQ regulation 30 TAC §330.545 requires the FAA and any affected airport be notified of a proposed site. To the best of our knowledge, no airport is located within a six mile radius of the transfer station. Please confirm whether or not the proposed transfer station will adversely impact the operation of any airport.
If you need any further information, please do not hesitate to contact Mr. Jeff Mayfield with NTMWD at the phone number on the letterhead or Mr. Robert Fifarek with CP&Y, Inc. at (214) 638-0500. Kindly provide all written correspondence regarding this matter to NTMWD at the address on the letterhead.

Sincerely,

[Signature]

JAMES M. PARKS
Executive Director

Attachment: Location Map

cc: Robert Fifarek, P.E., - CP&Y, Inc.
NTMWD Central File – Lookout Drive TS 9.0
April 24, 2007

Jeff Mayfield
NTMWD Assistant Solid Waste Manager
505 E. Brown Street
Wylie, TX 75098

Dear Jeff,

I have enclosed a memo from Monica Heid, Director of Development Services where she states that the Lookout Transfer Station is allowed within the current zoning classification since the transfer station is considered a public building/facility. I trust this answers your question regarding a zoning change for the Lookout Site. Should you have questions please give me a call, 972-744-4223.

Sincerely,

Travis Switzer
Assistant Director of Public Services – Environmental Operations

Enclosure
MEMO

TO: Jerry Ortega, Director of Public Services
FROM: Monica Heid, Director of Development Services
DATE: April 23, 2007
RE: Zoning – NTMWD Transfer Station

As we discussed this morning, the property upon which the proposed NTMWD transfer station facility will be located, generally at the eastern terminus of Lookout Drive east of Plano Road, is zoned R-1800-M Residential. I have confirmed with the City Attorney that this use would be considered a “public building” (the definition includes a building, structure or facility), which is a permitted activity in this and all residential zoning districts.

If you have any additional questions, please let me know.

cc: Michael Wanchick, Assistant City Manager – Development Services
    John Webb, Assistant Director of Development Services – Planning
    Susan Smith, Assistant Director of Development Services – Development and Engineering
    Ron Smith – Senior Planner
memorandum
City of Richardson

To:         Stephanie Pennington
            Commercial Plan Reviewer

From:       Israel B. Roberts, AICP
            Development Review Manager

Date:       March 17, 2009

Subject:    Administrative Approval
            North Texas Municipal Water District Transfer Station
            1601 E. Lookout Drive

The site and landscape plans for the subject property have been approved as permitted by the
Comprehensive Zoning Ordinance and the Subdivision and Development Code.

Proper permits must be secured from the Building Inspection Department prior to commencement of construction.

Copy:       Site Plan File
            North Texas Municipal Water District
            c/o Jeff Mayfield
            PO Box 2408
            Wylie, TX 75098
Mr. Mayfield:

Jerry Ortega requested I send you a confirmation that the latest set of civil plans submitted by CP&Y, signed and stamped by the engineer of record on October 9, 2009, did conform to city of Richardson development standards at that time.

The plans will be re-evaluated at the time of construction to ensure no changes are necessary for compliance at that time.

The City will issue the plans for construction at the pre-construction meeting held prior to the start of the civil construction.

Dan Tracy, P.E.
Development Engineer
City of Richardson
(972) 744-4250
(972) 744-5804
APPENDIX II-H

LAND USE ANALYSIS
LAND USE ANALYSIS
Lookout Drive Transfer Station
MSW 53A

July 20, 2011

Prepared by:
John Worrall Consulting LLC
509 Camino Barranca
Round Mountain, TX 78663
830.825.3029
Preface

This report was prepared specifically to address those portions of TCEQ rules pertaining to land use compatibility. The relevant rule portions, as excerpted from 30 TAC 330.61, are:

(g) Land-use map. This is a constructed map of the facility showing the boundary of the facility and any existing zoning on or surrounding the property and actual uses (e.g., agricultural, industrial, residential, etc.) both within the facility and within one mile of the facility. The owner or operator shall make every effort to show the location of residences, commercial establishments, schools, licensed day-care facilities, churches, cemeteries, ponds or lakes, and recreational areas within one mile of the facility boundary...

(h) Impact on surrounding area. A primary concern is that the use of any land for a municipal solid waste facility not adversely impact human health or the environment. The owner or operator shall provide information regarding the likely impacts of the facility on cities, communities, groups of property owners, or individuals by analyzing the compatibility of land use, zoning in the vicinity, community growth patterns, and other factors associated with the public interest. To assist the commission in evaluating the impact of the site on the surrounding area, the owner or operator shall provide the following:

1. if available, a published zoning map for the facility and within two miles of the facility for the county or counties in which the facility is or will be located. If the site requires approval as a nonconforming use or a special permit from the local government having jurisdiction, a copy of such approval shall be submitted;
2. information about the character of surrounding land uses within one mile of the proposed facility;
3. information about growth trends within five miles of the facility with directions of major development;
4. the proximity to residences and other uses (e.g., schools, churches, cemeteries, historic structures and sites, archaeologically significant sites, sites having exceptional aesthetic quality, etc.) within one mile of the facility. The owner or operator shall provide the approximate number of residences and commercial establishments within one mile of the proposed facility including the distances and directions to the nearest residences and commercial establishments. Population density and proximity to residences and other uses described in this paragraph may be considered for assessment of compatibility...
Introduction

The Lookout Drive Transfer Station (MSW 53A) is a phased replacement and expansion of the existing Lookout Drive Transfer Station (MSW 53) operated by North Texas Municipal Water District (NTMWD) since the mid 1970’s. The expanded transfer station is essentially a redevelopment of the existing transfer station (4.75 acres) and an adjoining City of Richardson fire training center, gun range and materials storage yard (4.13 acres).

The site is in the City of Richardson, approximately 1 mile east of US 75 and one mile south of President George Bush Turnpike (SH 190). Please refer to Figure LU-1.

The site can only be accessed from the west via Lookout Drive.

Zoning

The land within permit boundary is zoned R-1800-M (residential), by the City of Richardson. The City has determined that the use of the property as a transfer station is a permitted activity as zoned, and that rezoning or special permits are not required.

The zoning immediately to the north, east, and south of the site is also R-1800-M, though it is used as a golf course and a park. The zoning immediately west (Owens) and southwest (vacant) of the site is I-M(1) (industrial).

In addition to Richardson, the cities of Garland and Plano are within two miles of the permit boundary. Zoning for all jurisdictions within two miles of the permit boundary is indicated in Figure LU-2. A list of zoning districts for the three cities is included in Appendix A-1.
Character of Surrounding Land Uses

Land use within one mile is illustrated on Figure LU-3 and is specifically characterized as follows:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Acres</th>
<th>Percentage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential-Single Family</td>
<td>843</td>
<td>36%</td>
<td>2542 units</td>
</tr>
<tr>
<td>Open</td>
<td>589</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>408</td>
<td>18%</td>
<td>6 parks</td>
</tr>
<tr>
<td>Office/Commercial</td>
<td>395</td>
<td>17%</td>
<td>84 establishments</td>
</tr>
<tr>
<td>Quasi-Public</td>
<td>90</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Residential-Multi-Family</td>
<td>8</td>
<td>&lt;1%</td>
<td>335 units</td>
</tr>
<tr>
<td><strong>Total, one mile</strong></td>
<td><strong>2,333</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Inventory, May 2011

Within one mile of the permit boundary, 36% of the area is residential land use, primarily single family. All of the single family land uses (2542 units) are south of Renner Road and east of Plano Road, essentially surrounding the Sherrill Park (36 hole) Municipal Golf Course. There are two multi-family projects within one mile, as follows:
- 285 units, located 4000 feet west of the permit boundary, near US 75 and the Galatyn DART Station
- 50 units, located 1 mile northeast of the permit boundary, near Bush Turnpike at Jupiter Road

The second largest land use category is open (including vacant and rights-of-way), at 25%. Most of the open land within one mile is north and west of the permit boundary, notably near the Bush Turnpike, which opened in 1999. The City of Richardson Comprehensive Plan (adopted January, 2009) indicates that most of these open lands are planned to be developed as regional employment (office), as well as a transit village. (Transit villages are relatively intense mixed use developments that may include multi-family residential, as well as retail and office.) The transit village planned around the Bush Turnpike DART station--near the Bush Turnpike and US 75--is slightly more than one mile northwest of the permit boundary. The open parcel immediately southwest of the permit boundary is planned for office/industry according to the Comprehensive Plan, and has industrial zoning.

Approximately 18% of the land within one mile is public. Virtually all of the public land within one mile of the permit boundary is dedicated to recreational uses. Two public parks adjoin the permit boundary--Sherrill Park Municipal Golf course to the north and east and Lookout Park to the south. There are four other public parks within one mile--Spring Creek Nature Area, Galatyn Woodland Preserve, Foxboro Park and Trail, and Crowley Park.
Office/commercial land uses within one mile comprise 17% of the land area, and virtually all such uses are west of the permit boundary and proximate to US 75. Many of the office uses are directly or indirectly associated with the regional employment complex known as the Telecom Corridor, concentrated along US 75, north of Campbell Road.

Aside from water bodies, the only other land use within a mile is classified as quasi-public (4%), which includes churches (7), cemeteries (2), and day care center (1).

Growth Trends

The population growth within the City of Richardson is leveling out. Census data since 1980 reveal that the direction of suburban Dallas growth is to the north of Richardson, in the communities of McKinney, Frisco, Allen and Plano. According to the North Central Texas Council of Governments (NCTCOG), from 2000 to 2010, three of these cities were among the five fastest growing cities in the Dallas Fort Worth metropolitan area, namely:

--Allen (approximately 8 miles north of the permit boundary),
--Frisco (approximately 14 miles north), and
--McKinney (approximately 16 miles north).

Population Growth Trends of Richardson and Nearby Cities, 1980-2010

![Population Growth Trends Graph](image)

Source: NCTCOG, Population Estimates, April 2011. (Refer also to Appendix A-2 for associated table of data.)
NCTCOG is projecting that future (2010-2030) metropolitan area household and population growth will continue to occur well north of Richardson, as illustrated by Figure LU-4.

Within five miles of the permit boundary, no household growth is expected to occur southeast of the permit boundary, nor northwest, through the year 2030. Refer to Figure LU-5. NCTCOG is projecting that the most household growth within five miles will occur four to five miles northeast of the permit boundary, in southeast Plano and east Richardson.

Within one mile of the permit boundary, it is unlikely that any further single family residential growth will occur. The City of Richardson Comprehensive Plan indicates that open/vacant land within one mile will be developed as regional office and as transit villages near the DART rail stations.

Proximity

As of May 2011, there are 2877 residences (2542 single family and 335 multi-family units) within one mile of the permit boundary. The most proximate residence is approximately 625 feet north of the permit boundary, on Braeburn Drive.

There are an estimated 84 commercial structures (primarily office and retail) within one mile of the permit boundary. Many of the structures have multiple business tenants as well as multiple vacancies. The most proximate business establishment is a manufacturing facility (Owens Country Sausage, Inc.), 100 feet west of the permit boundary.

There are seven churches within one mile of the permit boundary, the nearest being approximately 3300 feet south of the permit boundary. There are two cemeteries within one mile, the nearest being 3200 feet northwest of the permit boundary.

The Texas Historical Commission indicates that there are two historical resources within one mile of the permit boundary:

--The Hill Robberson House was built in 1887, and was moved in 1979 to a location on Plano Road north of Lookout Drive, approximately 1200 feet west of the permit boundary, and

--The Routh Cemetery, approximately 3200 feet northwest of the permit boundary.

There is one licensed day care center approximately 4600 feet southwest of the permit boundary.

There are no schools or sites having exceptional aesthetic quality within one mile of the permit boundary.
Appendix

Appendix A-1

Zoning districts—Plano, Richardson and Garland

1. City of Plano
   a. Residential Districts
      i. A – Agricultural
      ii. ED – Estate Development
      iii. GR – General Residential
      iv. MH – Mobile Home
      v. MF-1 – Multifamily Residence-1
      vi. MF-2 – Multifamily Residence-2
      vii. MF-3 – Multifamily Residence-3
      viii. PH – Patio Home
      ix. SF-A – Single-Family Residential Attached
      x. SF-6 – Single-Family Residence-6
     xi. SF-7 – Single-Family Residence-7
      xii. SF-9 – Single-Family Residence-9
      xiii. SF-20 – Single-Family Residence-20
      xiv. 2F – Two-Family Residence (Duplex)
      xv. UR – Urban Residential
   b. Non-Residential Districts
      i. BG – Downtown Business/Government
      ii. CB-1 – Central Business-1
      iii. CE – Commercial Employment
      iv. CC – Corridor Commercial
      v. LC – Light Commercial
      vi. LI-1 – Light Industrial-1
      vii. LI-2 – Light Industrial-2
     viii. O-1 – Neighborhood Office
      ix. O-2 – General Office
      x. RC – Regional Commercial
      xi. RE – Regional Employment
     xii. RT – Research/Technology Center
     xiii. R – Retail
2. City of Richardson
   a. Zoning Districts
      i. R-1500-M - Residential
      ii. R-2000-M - Residential
      iii. R-1800-M - Residential
      iv. R-1250-M - Residential
      v. R-1100-M - Residential
      vi. R-1000-M - Residential
      vii. R-950-M - Residential
      viii. R-850-F - Residential
      ix. R-850-M - Residential
      x. RA-1100-M - Residential Attached (Townhome)
      xi. RP-1500-M - Patio Home
      xii. D-1400-M - Duplex
      xiii. D-2400-M - Duplex
      xiv. D-3000-M - Duplex
      xv. A-1000-M - Apartment
      xvi. A-950-M - Apartment
      xvii. A-850-F - Apartment
      xviii. LR-M(1) - Local Retail
      xix. LR-M(2) - Local Retail
      xx. C-M - Commercial
      xxi. O-M - Office
      xxii. I-M(1) - Industrial
      xxiii. I-M(2) - Industrial
      xxiv. IP-M(1) - Industrial
      xxv. I-FP(1) - Industrial
      xxvi. I-FP(2) - Industrial
      xxvii. TO-M - Technical Office
      xxviii. FP - Floodplain
      xxix. PD - Planned Development
      xxx. MU - Mixed Use
      xxxi. Special Permits
   b. Prefixes
      i. R - Residential District
      ii. RP - Residential Patio Home District
      iii. RA - Residential Attached (Townhome) District
      iv. D - Duplex District
      v. A - Apartment District
      vi. LR - Local Retail District
      vii. C - Commercial District
      viii. O - Office District
      ix. TO - Technical Office District
x. I - Industrial District  
xii. MU - Mixed Use District  
xiii. PD - Planned Development District  
xiv. FP - Floodplain  
c. Suffixes  
i. -M Masonry Construction  
ii. -F Frame Construction  
iii. -FP Fireproof Construction  

3. City of Garland  
a. Zoning Districts  
i. AG - Agriculture  
ii. AU - Automotive Uses Overlay  
iii. C-1 - Commercial  
iv. C-2 - Commercial  
v. CA-1 - Central Area-1  
vi. CA-2 - Central Area-2  
vii. D - Duplex  
viii. FW - Freeway  
ix. GB - General Business  
x. HS - Health Service  
xii. I-1 - Industrial-1  
xiii. I-2 - Industrial-2  
xiv. MF-12 - Multifamily  
xv. MF-18 - Multifamily  
xvi. NS - Neighborhood Service  
xvii. O-1 - Office-1  
xviii. O-2 - Office-2  
xxvii. PD - Planned Development  
xix. SC - Shopping Center  
xx. SF/16 – Single-Family  
xxi. SF/10 – Single-Family  
xxii. SF/7 - Single-Family  
xxiii. IH 30 - Overlay Uses  
xxiv. IH 635 - Overlay Uses  
xxv. SH 190 - Overlay Uses
Appendix A-2

Table A-1--Population Growth Trends of Selected Cities, 1980-2010

<table>
<thead>
<tr>
<th>City</th>
<th>1980</th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allen</td>
<td>8,314</td>
<td>18,309</td>
<td>43,554</td>
<td>84,246</td>
</tr>
<tr>
<td>Frisco</td>
<td>3,499</td>
<td>6,141</td>
<td>33,714</td>
<td>116,989</td>
</tr>
<tr>
<td>McKinney</td>
<td>16,256</td>
<td>21,283</td>
<td>54,369</td>
<td>131,117</td>
</tr>
<tr>
<td>Plano</td>
<td>72,331</td>
<td>128,713</td>
<td>222,030</td>
<td>259,841</td>
</tr>
<tr>
<td>Richardson</td>
<td>72,496</td>
<td>74,840</td>
<td>91,802</td>
<td>99,223</td>
</tr>
</tbody>
</table>

Source: NCTCOG, Population Estimates, April 2011
FIGURE LU-1
METROPOLITAN CONTEXT

Legend
Shaded areas indicate Municipalities and Lakes

LAND USE ANALYSIS
Lookout Drive Transfer Station

DATA SOURCES
North Central Texas Council of Governments
GIS Data Exchange (Permit/Lane #1)

Scale: 1:30,000
North

[Map showing metropolitan context with shaded areas indicating municipalities and lakes, and a permit boundary]
FIGURE LU-4
GROWTH TRENDS - METROPOLITAN REGION

Projected Household Growth by Traffic Survey District
(Percentage 2010-2030)

LAND USE ANALYSIS
LOOKOUT DR. TRANSFER STATION

DATA SOURCES
North Carolina Council of Governments
FIGURE LU-5
GROWTH TRENDS - 5 MILE

Projected Household Growth by Traffic Survey District
(Percentage 2010-2030)

- No Change
- 1 - 50%
- 51 - 100%
- 101 - 150%
- 151 - 200%
- 201 - 250%
- 251 - 300%

LAND USE ANALYSIS
LOOKOUT DR. TRANSFER STATION

DATA SOURCES

Scale: 1" = 1000 feet

Engineering Firm
John Worrell Consulting
Phone: 336-323-3300
Email: john.worrell@ncpg.com
PART II ATTACHMENTS
NORTH TEXAS MUNICIPAL WATER DISTRICT
LOOKOUT DRIVE TRANSFER STATION
RICHARDSON, TEXAS
COLLIN COUNTY

PART III

PERMIT AMENDMENT
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
PERMIT NO.: MSW 53A

OCTOBER 2012
REVISION 2

Applicant:
North Texas Municipal Water District

PO Box 2408
Wylie, Texas 75098

Prepared by:
CP&Y Inc.
1820 Regal Row, Suite 200
Dallas, Texas 75235
Firm No: 1741
# PART III

## TABLE OF CONTENTS

1. **Introduction** .................................................................................................................. 1

2. **Phasing** .......................................................................................................................... 1
   - 2.1. PHASE 1 .................................................................................................................. 1
   - 2.2. PHASE 2 .................................................................................................................. 2

3. **General Facility Design [§330.63(b)]** ........................................................................... 2
   - 3.1. Facility Access (330.63(b)(1)) .................................................................................. 2
   - 3.2. Waste Movement (330.63(b)(2)) .............................................................................. 3
     - 3.2.1. Waste Flow (330.63(b)(2)(A and B)) ................................................................. 3
     - 3.2.2. Ventilation and Odor Control (330.63(b)(2)(c)) ............................................... 5
     - 3.2.3. General Construction Details (330.63(b)(2)(D, E and F)) ............................... 6
     - 3.2.4. Storage of Grease, Oil and Sludge (330.63(b)(2)(G)) ...................................... 8
     - 3.2.5. Effluent Discharge (330.63(b)(2)(H)) ............................................................... 8
     - 3.2.6. Noise (330.63(b)(2)(I)) ................................................................................... 9
   - 3.3. Sanitation (330.63(b)(3)) ....................................................................................... 9
   - 3.4. Water Pollution Control (330.63(b)(4)) ................................................................. 9
   - 3.5. Endangered Species Protection (330.63(b)(5)) ...................................................... 10

4. **Facility Surface Water Drainage Report [§330.63(c)]** ...................................................... 10
   - 4.1. Drainage Analyses ................................................................................................... 12
   - 4.2. Basis of Hydrologic Analysis .................................................................................. 12
   - 4.3. Drainage Analysis Results ..................................................................................... 14
     - 4.3.1. Phase 1 ............................................................................................................. 14
     - 4.3.2. Phase 2 ........................................................................................................... 16
   - 4.4. Flood Control Analysis ............................................................................................ 18

5. **Waste Management Unit Design [§330.63(d)]** ................................................................. 18
   - 5.1. Storage and Transfer Units .................................................................................... 18
     - 5.1.1. Facility Sizing .................................................................................................. 18
5.1.2. Storage Capacity and Maneuver Space ................................................. 19
5.1.3. Facility Equipment .................................................................... 20
5.1.4. Facility Design Features .......................................................... 20
5.1.5. Unloading of Solid Waste .......................................................... 21
6. Geology Report [§330.63(e)] .............................................................. 21
7. Groundwater Sampling and Analysis Plan [§330.63(f)] .................... 21
8. Landfill Gas Management Plan [§330.63(g)] .................................... 21
9. Closure Plan [§330.63(h)] ................................................................. 22
   9.1. Existing Transfer Station ............................................................ 22
      9.1.1. Closure Requirements ....................................................... 22
      9.1.2. Certification of Final Closure ............................................. 22
   9.2. Closure of the Proposed Transfer Station in the Northern Tract ..... 23
      9.2.1. Closure Requirements ....................................................... 23
      9.2.2. Certification of Final Closure ............................................. 24
10. Post-Closure Plan [§330.63(i)] .......................................................... 25
    11.1. Closure Cost Estimate .......................................................... 25
    11.2. Post-Closure Cost Estimate .................................................... 26
    11.3. Financial Assurance .............................................................. 26
TABLES

TABLE III-1 – PHASE 1 DRAINAGE ANALYSIS
TABLE III-2 – PHASE 1 DISCHARGE SUMMARY
TABLE III-3 – PHASE 2 DRAINAGE ANALYSIS
TABLE III-4 – PHASE 2 DISCHARGE SUMMARY

APPENDICES

APPENDIX III-A – CLOSURE COST ESTIMATES
APPENDIX III-B – FINANCIAL ASSURANCE DOCUMENTATION
APPENDIX III-C – DRAINAGE CALCULATIONS
APPENDIX III-D – ODOR MANAGEMENT PLAN
APPENDIX III-E – BASIS OF TRANSFER STATION DESIGN CAPACITY

ATTACHMENTS

ATTACHMENT III-0-1 – PERMIT BOUNDARY – PHASE 1
ATTACHMENT III-0-2 – PERMIT BOUNDARY – PHASE 2
ATTACHMENT III-1 – PROCESS DESIGN
ATTACHMENT III-1A – PROCESS DIAGRAM
ATTACHMENT III-2-1 – DRAINAGE AREAS – PHASE 1
ATTACHMENT III-2-2 – DRAINAGE AREAS – PHASE 2
ATTACHMENT III-3 – TRANSFER STATION BUILDING PROFILE
ATTACHMENT III-4 – BUILDING STRUCTURAL DETAILS
1. **Introduction**

This permit amendment application for the NTMWD Lookout Drive Transfer Station has been prepared consistent with 30 Texas Administrative Code (TAC) Chapter 330 and includes this Site Development Plan (SDP) and its attachments. This facility is designed to provide for the safeguarding of the health, welfare and physical property of the people and the environment.

The NTMWD is amending its Municipal Solid Waste Permit No. 53 to construct a proposed transfer station facility to replace the existing facility which has been in operation for over 30 years. The proposed Lookout Drive Transfer Station, as described, is expected to ultimately receive approximately 750 tpd (averaged over 365 days) of solid waste under normal conditions. However, the facility will have a design capacity in excess of the 1,500 tons per day for peak conditions. See Appendix III-E for Basis of Transfer Station Design Capacity. The Lookout Drive Transfer Station is located east of the intersection of E. Lookout Drive and N. Plano Road in the City of Richardson, Collin County, Texas.

2. **Phasing**

Waste management activities under this permit will be authorized in two phases. The boundaries applicable to each phase are shown in Attachments III-0-1 and III-0-2 respectively (also showing the “Northern Tract”, the “Southern Tract” and the “Overlap Tract”), and the metes and bounds for each phase are shown in Appendix I-A.

2.1. **PHASE 1**

Phase 1 will begin when the permit amendment (MSW-53A) is issued. The Phase 1 permit boundary will be the permit boundary configuration shown on Attachment III-0-1 (consisting of the “Northern Tract,” “Southern Tract,” and “Overlap Tract”). Phase 1 will consist of 1) construction of the proposed building on the Northern Tract and concurrent operations on the Southern Tract, and 2) operations on the Northern Tract and concurrent closure of the Southern Tract in accordance with Part III, Section 9.1. At no time will waste management operations be conducted in both buildings concurrently.
Phase 1 will continue until the TCEQ has approved the certification required in Part III, Section 9.1, that closure of the Southern Tract has been completed.

2.2. PHASE 2

Phase 2 will begin when the TCEQ has approved the certification required in Part III, Section 9.1, that closure of the Southern Tract has been completed.

The Phase 2 boundary will become the permit boundary configuration shown on Attachment III-0-2 (consisting of the “Northern Tract” and “Overlap Tract”). Phase 2 will continue for the life of the facility unless later amended or modified in accordance with TCEQ rules.

3. General Facility Design [§330.63(b)]

3.1. Facility Access (330.63(b)(1))

Access to the site during both Phase 1 and Phase 2 will be controlled by perimeter fencing (minimum 6 feet tall chain-link) and a locked gate when the facility is closed as shown on Attachments II-3-1 and II-3-2. Access through the gate during operating hours will be controlled by personnel in the scale house near the site entrance. These access controls will be suitable to prevent the entry of livestock, to protect the public from exposure to potential health and safety hazards, and to discourage unauthorized entry or uncontrolled disposal of solid waste or hazardous material.

Access to the facility during both Phase 1 and Phase 2 will be by way of E. Lookout Drive which is a 4 lane divided asphalt all-weather roadway which dead-ends approximately 550 feet east of the entrance to the facility. This roadway is designed with adequate turning radii to safely handle the vehicles expected at the facility. Only authorized vehicles will have access beyond the facility entrance. Signage will provide direction to customers and the public at the entrance of the facility. Additional signage within the facility will provide direction to public unloading areas. Parking areas are provided on site for equipment, employees and visitors. The access roadway, interior roadways and unloading areas are concrete or asphalt construction to minimize dust and mud.
In addition to the perimeter fencing, access is restricted from the north and east by Spring Creek. There are currently no roads or bridge structures crossing Spring Creek immediately adjacent to the Site.

Regular maintenance of onsite roadways and mud removal will minimize the generation of dust on facility roads and off-site roadways.

3.2. **Waste Movement (330.63(b)(2))**

3.2.1. Waste Flow (330.63(b)(2)(A and B))

See Attachment III-1 for the proposed transfer station facility process design layout. See Attachment III-1A for the existing and proposed transfer station process diagram and see Attachment II-3-1 for the existing facility layout.

In both Phases, solid waste vehicles delivering waste to the facility will enter via E. Lookout Drive at the facility entrance located at the southwest corner of the property, and drive on to the scale(s) at the scale house. An operator at the scale house will record each vehicle’s weight after which the vehicle will proceed to the transfer station in operation. The waste traffic movement is designed to circulate one way on facility roads entering the existing facility in Phase 1 and the proposed facility in Phases 1 and 2. Vehicles will enter the proposed facility on the east side. After unloading in the proposed facility, solid waste vehicles will exit on the west side of the building and return to the scale area to weigh out with the scale operator if their empty weight is not stored in the scale ticket software and then exit onto E. Lookout Drive. Vehicles will enter the existing facility during Phase 1 from the west side. After unloading in the existing transfer facility, they will exit the facility onto E. Lookout Drive. During construction of the proposed facility, normal waste traffic circulation in the existing facility may be rerouted.

Private citizens bringing waste to the site will enter as previously described. The scale operator will record residency information and they will proceed to the existing citizen collection station during the operation of the existing transfer facility. Upon operation of the proposed facility, the citizens will proceed into the transfer station building. Private citizens delivering recyclable materials will
proceed directly to the operating recycling drop-off area from the scale area rather than to the transfer facility.

During both phases, vehicles delivering used oil will proceed to the appropriate used oil drop off area and place the used oil in the double-walled storage container. Used oil will be transported off-site as the container is full, or at a minimum, at least once per quarter to a recycler.

Empty transfer vehicles arriving at the facility will also enter from the southwest corner of the facility in the same location as waste hauling traffic. While the existing facility is in operation, the transfer vehicles will proceed to the east end of the existing transfer facility and will be loaded with one of the existing stationary compactors. Once loaded they will exit onto E. Lookout Drive. When operations begin in the proposed facility these vehicles will proceed along the one way road to the transfer station building, and continue on to the loading tunnel on the north side of the building instead of entering the building at the east entrance. Each transfer vehicle will then be loaded under one of two top loading hoppers. Once loaded, the transfer vehicles will exit to the west on the north side of the building and proceed along the one way roadway and exit the facility onto E. Lookout Drive.

Upon operation of the proposed facility, waste (not including recyclables) is accepted at the site only within the enclosed transfer station building. The entrance and exit doors for the collection vehicles are sized so that vehicles have ample space to safely enter and exit the building.

The vertical clearance within the proposed transfer building between the tipping floor and any roof structural supports, electric lights, ventilation, or sprinkler system is designed to provide sufficient clearance above the tipping floor for refuse handling operations within the building interior.

The unloading and waste storage area (noted as Tipping Floor on Attachments III-1 and III-3) for the proposed facility will measure approximately 105 feet by 152 feet. This area is the approximate size of the tipping floor measured between the loading hoppers in the north end of the building to the north edge of the 20
feet building access road. A maneuver area of 55 feet by 152 feet will be used for turning after they enter the building from the east side. All collection vehicles and private citizens will maneuver into a designated unloading area, come to a complete stop and unload the vehicle on the tipping floor. The vehicle will then pull forward, and exit through the west side building exit door. A wheeled loader will push the unloaded waste into tipping floor hoppers where waiting transfer trailer trucks will be loaded. A clam bucket or knuckle boom tamper will assist in spreading and loading the waste into the transfer trailers. Loaded transfer trailers will be covered before leaving the site and will proceed to an approved disposal facility.

The tipping floor and storage area of the proposed building is designed to have a storage capacity of at least 900 tons of waste within the enclosed building walls. The storage capacity is designed to provide adequate space on the tipping floor for normal operations and to avoid delays due to anticipated traffic volumes. It is not anticipated that materials will be stored in the facility overnight except for extenuating emergency circumstances such as weather or mechanical breakdown. Storage of waste, if required, will be enclosed in the transfer station building to control wind-blown material and minimize odors.

Prior to the start of operations at the proposed facility, waste will continue to be unloaded, temporarily stored and transferred at the existing transfer facility.

3.2.2. Ventilation and Odor Control (330.63(b)(2)(c))

Ventilation

Ventilation of the proposed facility will be provided to assist in odor and dust control inside the building structure. The ventilation system will consist of air handling units and a series of louvers sized to provide adequate ventilation. The facility will be designed to provide a minimum of 15 air turnovers per hour. Heating will be not be provided in the building structure, however, a heat trace or insulation will be used to prevent any exposed potable/not-potable pipes from freezing during cold weather.
The existing facility is a three-sided building and additional ventilation is provided by existing fans.

**Odor Control**

When operations being in the proposed facility, waste handling operations are designed to be primarily carried out within the building. The facility will be operated to provide adequate ventilation for odor control and employee safety. The facility will not store waste in the building overnight except for extenuating emergency circumstances such as inclement weather or mechanical breakdown. The building floor will be washed at least twice per week, and more often if required by site conditions. Wash water will not be allowed to accumulate on-site without proper treatment to prevent the creation of odors. If complaints are received regarding nuisance odors outside the facility permit boundary, the facility operator shall conduct an investigation and shall follow-up with the complainant. An odor neutralization system will be installed inside the facility building. These design features will minimize air emissions from the facility and are not expected to cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act. An Odor Management Plan for the Facility is included as Appendix III-D.

While the existing facility is in operation, odors will be controlled in accordance with the Site Operating Plan for the existing facility (See Part IV-A).

3.2.3. General Construction Details (330.63(b)(2)(D, E and F))

Attachment III-3 provides a general layout of the proposed transfer station building and Attachment III-4 provides generalized building sections. Building materials will consist of concrete or steel components or similar suitable material to meet operational requirements. The tipping floor and push walls will be constructed of concrete to allow for easy cleaning and periodic washing down of the facility. Floor drains and trench drains will be provided to capture wash down water. Wash down water will pass through a sand/grease trap before discharge into the sanitary sewer system. The transfer station building will occupy an area of approximately 220-feet by 152-feet and will allow unimpeded operations from
columns and supports inside the building. The design of the building will incorporate a split level design with a transfer trailer loadout tunnel sized to allow two full size transfer vehicles to be loaded at the same time. The transfer trailer tunnel loading area will be constructed at an elevation that is approximately 18-feet lower than the tipping floor to accommodate the truck height, road surface, steel hoppers and tunnel scales. Each of the transfer vehicles will be loaded while on a set of scales to maintain load control to avoid overloading and exceeding local load allowances for roadways to the disposal facility.

The proposed building foundations will be designed based upon the soil conditions to be determined after a complete site soils investigation as part of the construction drawing development process. The building will be ventilated through a system of air handling units, doors, windows, and louvers to provide a minimum of 15 air turnovers per hour in the transfer station building.

The proposed transfer station building will be serviced by 480-volt, 3-phase electrical service. Power will be distributed using a 480-volt panel, 480-volt to 208/120-volt transformer and 208/120-volt panels. The conduit system will be constructed of materials resistant to corrosion. Adequate lighting will be provided at all areas in the transfer station site. Security lighting will remain on during the nighttime hours.

There are no planned containment dikes as the proposed facility is designed to capture all water that has come into contact with waste within the building and discharge into the sanitary sewer system. Exterior stormwater will be captured by a series of curb inlets and trench drains to prevent stormwater from entering the facility and coming in contact with waste. These inlets and trench drains are shown in Attachment III-2-1 and III-2-2.

All proposed onsite roadways and vehicle parking areas will be constructed with reinforced concrete pavement. In the proposed facility, concrete push walls will be installed inside of the building and are not part of the building exterior structure. Two transfer trailer top loading hoppers will be located on the north end of the building above the loading tunnel. A clam shell/knuckle boom type
tamper will be used to assist loading the transfer trailers in the hopper area. Enough space between push walls and the building exterior walls will be available for perimeter access within the building by NTMWD employees.

Recyclables will be stored in roll off recycle bins located in the recycle drop off area. These bins will be located on concrete pavement. The used oil storage will be located inside the transfer station building when operations begin in the proposed facility and adjacent to the citizen collection area during operations in the existing facility.

3.2.4. Storage of Grease, Oil and Sludge (330.63(b)(2)(G))

The facility does not accept waste grease or sludge. However, residents will be allowed to drop off used oil under a used oil collection program. Collected used oil will be stored in a double walled container located as noted above. This used oil will be transported by an authorized hauler to recycle the material. The used oil will be removed from the site at least quarterly. Therefore, no other storage provisions have been made.

3.2.5. Effluent Discharge (330.63(b)(2)(H))

Effluent wastewaters will be generated as a result of residual moisture from unloaded refuse or from wash down water used to clean the transfer station building. In both the existing and proposed facilities the tipping floor is designed to collect the water that results from these activities and convey the water to a series of floor drains where it will be directed to one or more sand/grease traps before discharging to an approved City of Richardson sanitary sewer. Wash water from the tunnel loading area in the proposed facility will be pumped from a collection drain to a sand/grease trap and then be discharged with the flow from the tipping floor. Any washdown from the used oil containment area will be conveyed to a floor drain within the building where it will be directed into a sand/grease trap before discharging to the City sanitary sewer.
3.2.6. Noise (330.63(b)(2)(I))

The nearest residence to the site is approximately 630 feet from the permit boundary. To minimize noise resulting from the operations of the transfer station facility, operations in the proposed facility will primarily be conducted within the enclosed building. Noise will be minimized during operation of the existing facility through compliance with the Site Operating Plan (See Part IV-A).

In addition, "white noise" back up alarms will be utilized by all on-site heavy equipment (ie. front end loaders). The proposed facility will be designed such that noise from the facility will not adversely impact nearby residences.

3.3. Sanitation (330.63(b)(3))

For the proposed facility, a pressurized water system will be included in the design with adequate connections to facilitate facility cleaning. All working surfaces that come in contact with waste will be washed at least twice weekly at the completion of the processing period (end of the work day). The surfaces to be cleaned will be constructed of materials shown on Attachment III-3. All other surfaces to be cleaned will be constructed of materials that can be hosed down and scrubbed. Wash water in contact with surfaces inside the building will be collected in a series of floor drains, passed through a sand/grease trap and discharged in the sanitary sewer system as described under Section 3.2.5 Effluent Discharge. Storm water will be controlled through a system of curb inlets and trench drains to prevent run-on/run-off from the transfer station building.

Sanitation activities during operation of the existing facility will be in accordance with the Site Operating Plan (See Part IV-A).

3.4. Water Pollution Control (330.63(b)(4))

All of the liquids resulting from the operation of the solid waste processing facilities will be disposed of in a manner that will not cause surface water or groundwater pollution. The facility will be designed to handle contaminated waters from the facility separately from stormwater.
The proposed building structure will prevent waste from being contacted by stormwater, with handling operations confined to the building interior. Stormwater surrounding the transfer station building will be conveyed away from the structure. Stormwater will be captured to prevent its entry into the loading tunnel area by a series of in-pavement screened trench drains which will convey it to the main stormwater discharge pipe.

Any contaminated water will be routed through a sand/grease trap and then discharged to the City of Richardson wastewater system for proper treatment. Effluent wastewaters will be generated as a result of residual moisture from unloaded refuse or from wash down water used in the transfer station building. The facility tipping floor is designed to collect water that results from these activities, and convey the water to a series of floor drains, where it will be directed to one or more sand/grease trap(s) before discharging to an approved City of Richardson sanitary sewer. Wash water from the tunnel loading area in the proposed facility will be pumped from a collection floor drain to a sand/grease trap and then discharged with the flow from the tipping floor to the sanitary sewer system.

3.5. Endangered Species Protection (330.63(b)(5))

Neither the construction nor the operation of the site will contribute to or cause the destruction or adverse modification of any critical habitats, nor will it contribute to or cause the taking of any endangered species or threatened species, since the critical habitat of the endangered species is not found on the site.

An Endangered Species Report is included in Appendix II-B.

4. Facility Surface Water Drainage Report [§330.63(c)]

The facility design complies with the requirements of 30 TAC 330.303 (Surface Water Drainage for Municipal Solid Waste Facilities).

It is designed to be constructed, maintained and operated to manage run-on and run-off during the peak discharge of a 25-year rainfall event and prevent the off-site discharge of waste material. Surface water drainage in and around the facility is controlled to minimize surface water running onto, into and off the permitted area.
The proposed transfer station facility site, including all phases, generally drains overland from the southwest to the northeast toward Spring Creek. There is no existing storm sewer system on the site. The nearest available storm sewers are located on E. Lookout Drive, west of the intersection of the 100 foot TXU easement and are up-gradient from the site. East of the TXU easement, stormwater drains by overland sheet flow to Spring Creek or is captured by curb and gutter and ditches of E. Lookout Drive. The site has sufficient gradient to develop an on-site storm sewer system.

From the Phase 1 permit area shown on Attachment III-2-1, two curb inlets and two trench drains are designed to receive storm water from the facility’s roadways and landscaped areas. The curb inlets and trench drains will drain into a 24” reinforced concrete pipe (RCP). The 24” RCP will convey stormwater eastward toward Spring Creek and discharge into a rip rap lined trapezoidal channel and subsequently to rip rap energy dissipater. See Attachment III-2-1 for location of curb inlets and trench drains on the roadway near the north end of the transfer station building. As required by the City of Richardson Site Development Permit, stormwater entering and exiting the loading tunnel and any wash water generated in the tunnel is considered contaminated and shall be discharged into the existing City of Richardson sanitary sewer system.

Attachment III-2-2 shows the drainage areas and flow into and from Phase 2.

A small area of the site is located within the 100-year floodway of Spring Creek as defined by the Federal Emergency Management Agency (FEMA). A copy of the Flood Insurance Rate Map (FIRM) for this site area was obtained, and is included in the Appendix II-A. This map, Community Panel No. 480184-0505-J, dated July 2, 2009, depicts the approximate limits of the 100-year floodplain and the 500-year floodplain. A LOMR has been approved to modify a small portion of the depicted 100-year floodplain. No construction is planned in the flood zone that lies on the northeast corner of the property. No structures are located within the floodway and drainage easement. Structures on the facility property are designed with a minimum elevation of 562.8 or 2.8 feet above the mapped 100-year floodway elevation of 560.0.

In addition a CLOMR-F has been approved to fill a portion of the site recently defined as a part of the 100-year flood plain. This fill will be conducted as a part of the proposed
site grading to accommodate a site roadway and will not affect the flood characteristics of Spring Creek. All of the floodplain definition and FEMA approvals can be found in Appendix II-A.

4.1. **Drainage Analyses**

Hydrologic analysis was performed at the permit boundary for each of the 2 phases of development. A total area of approximately 9.58 acres was studied. This 9.58 acre area, which is shown on Attachment III-2-1, represents the on and off-site drainage area contributing to the largest of the two Phases. Drainage areas (Attachments III-2-1 and III-2-2) were delineated based on the drainage patterns within each of the Phase permit boundaries.

The basis for drainage analysis is the 25-year 24-hour rainfall event. The Rational Method was used as the basis for calculations, as all the drainage areas under study are less than 200 acres. Appropriate surface runoff coefficients were obtained from the 2009 TxDOT Bridge Division Hydraulic Design Manual for the Rational Method. Drainage features are designed to accommodate the 25-year 24 hour storm.

4.2. **Basis of Hydrologic Analysis**

The site is divided into several watershed areas for hydrologic analysis. The watersheds contributing run-on to, and discharge from, the proposed permit boundary for Phase 1 and Phase 2 are the limits of the areas studied.

The Rational formula estimates the peak rate of runoff at any location in a watershed as a function of the drainage area, runoff coefficient, and mean rainfall intensity for a duration equal to the time of concentration (the time required for water to flow from the most remote point of the basin to the location being analyzed).
As obtained in the 2009 TxDOT Hydraulic Manual (TxDOT Manual), Equation 5-3, the rational formula is expressed as:

\[ Q = C I A \]

Where:
- \( Q \) = Peak discharge, cfs
- \( C \) = Rational method runoff coefficient
- \( I \) = Rainfall intensity, inch/hour
- \( A \) = Drainage area, acre

Runoff coefficients, \( C \), were obtained from the runoff coefficient table for urban watersheds in the 2009 TxDOT Hydraulic Manual, page 5-27. An adjustment factor for the 25-year 24 hour storm event, \( C_f \) of 1.1, was applied as required by the TxDOT Manual. The following coefficients were calculated in Appendix III-C:

- Grass covered areas \(- 0.24\)
- Concrete covered areas and building roofs \(- 0.90\)

The value of rainfall intensity \( I \), was derived from Equation 5-4, obtained from the TxDOT manual:

\[ I = \frac{b}{(t_c + d)^e} \]

Where:
- \( I \) = design rainfall intensity (in. / hr.) for Collin County.
- \( t_c \) = time of concentration (min)
- \( e = 0.779 \)
- \( b = 92 \) (in)
- \( d = 8.8 \) (min)
- \( e, b, d = \) coefficients for specific frequencies listed by county in the Rainfall Intensity-Duration-Frequency Coefficients. These are based on rainfall frequency-duration data contained in the National Weather Service Technical Paper 40 (TP 40).

Calculations for rainfall intensity can be found in Appendix III-C – Drainage Calculations.
The Upland Method of estimating time of concentration (Figure 5-4 of the TxDOT Hydraulic Design Manual) was used in determining times of concentration. If the calculated $t_c$ is less than 10 minutes, a value of 10 minutes was used as noted in §330.305(f)(1).

In accordance with published literature and TCEQ guidance, the permissible non-erodible velocity for channels and overland sheet flow with vegetation in good condition is approximately 5 fps. This velocity is considered appropriate for the slopes and soil type present at this site. Channel and conduit velocities are calculated with Hydraflow Express Extension for AutoCAD Civil 3D® 2012, version 9.0, by Autodesk, Inc.. Calculation sheets are included in Appendix III-C. Overland Flow Velocity is calculated with Equation 5-1, obtained from the TxDOT manual:

$$t_n = \frac{L_n}{60V_n}$$

Where:
- $t_n$ = Travel time over $n$th reach (min)
- $L_n$ = Length of $n$th reach along flow path (ft)
- $V_n$ = Estimated flow velocity for $n$th reach (fps)

4.3. Drainage Analysis Results

A summary of the results from the analysis is presented in the following sections. Analysis of each Phase includes on-site flows, which include flow generated from land within the permit boundary, and off-site flow, which includes flow generated outside the permit boundary that flows into the permit boundary. Both on-site and off-site flows are conveyed and ultimately discharged off-site. Supporting calculations are provided in Appendix III-C.

4.3.1. Phase 1

Within the Phase 1 permit boundary, there are seven (7) on-site sub-watersheds (A-G) and two (2) off-site sub-watersheds (H and I). The proposed sub-watersheds are shown in Attachment III-2-1. Table III-1 summarizes the flow generated from each of the on-site and off-site sub-watersheds.
Table III-1 – Phase 1 Drainage Analysis

<table>
<thead>
<tr>
<th>SUB WATERSHED</th>
<th>t&lt;sub&gt;c&lt;/sub&gt;, min</th>
<th>Rainfall Intensity, in/hr</th>
<th>WATERSHED AREA, ac</th>
<th>RUNOFF COEFFICIENT, C</th>
<th>PEAK DISCHARGE, cfs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>9.4</td>
<td>1.58</td>
<td>0.76</td>
<td>11.2</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
<td>9.4</td>
<td>0.21</td>
<td>0.24</td>
<td>0.5</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>9.4</td>
<td>0.94</td>
<td>0.24</td>
<td>2.1</td>
</tr>
<tr>
<td>D</td>
<td>10</td>
<td>9.3</td>
<td>1.97</td>
<td>0.83</td>
<td>15.2</td>
</tr>
<tr>
<td>E</td>
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<td>1.38</td>
<td>0.76</td>
<td>9.8</td>
</tr>
<tr>
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<td>1.42</td>
<td>0.53</td>
<td>7.1</td>
</tr>
<tr>
<td>G</td>
<td>10</td>
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<td>0.41</td>
<td>0.37</td>
<td>1.4</td>
</tr>
<tr>
<td>H</td>
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<td>8.9</td>
<td>0.68</td>
<td>0.56</td>
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</tr>
<tr>
<td>I</td>
<td>10</td>
<td>9.4</td>
<td>0.99</td>
<td>0.43</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Phase 1 sub-watersheds contribute flow to eight (8) outfalls. Table III-2 summarizes the stormwater discharge at each outfall. The proposed outfalls are shown on Attachment III-2-1 and include the velocity at each discharge.

Table III-2 – Phase 1 - Discharge Summary

<table>
<thead>
<tr>
<th>POINT OF DISCHARGE</th>
<th>CONTRIBUTING DRAINAGE AREAS</th>
<th>TYPE OF FLOW</th>
<th>WATERSHED AREA, ac</th>
<th>PEAK DISCHARGE (cfs)</th>
<th>TOTAL DISCHARGE (cf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outfall 1</td>
<td>B+J</td>
<td>Sheet</td>
<td>1.20</td>
<td>4.4</td>
<td>17,512</td>
</tr>
<tr>
<td>Outfall 2</td>
<td>C</td>
<td>Sheet</td>
<td>0.94</td>
<td>2.1</td>
<td>10,749</td>
</tr>
<tr>
<td>Outfall 3</td>
<td>A+D</td>
<td>Channel</td>
<td>3.55</td>
<td>26.4</td>
<td>66,312</td>
</tr>
<tr>
<td>Outfall 4</td>
<td>E</td>
<td>Channel</td>
<td>1.38</td>
<td>9.8</td>
<td>20,139</td>
</tr>
<tr>
<td>Outfall 5</td>
<td>F+G+H</td>
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<td>12.0</td>
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<tr>
<td>Outfall 6</td>
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<td>Sheet</td>
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<tr>
<td>Outfall 7</td>
<td>G+H</td>
<td>Sheet</td>
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<td>Outfall 8</td>
<td>I</td>
<td>Sheet</td>
<td>0.99</td>
<td>4.0</td>
<td>11,321</td>
</tr>
</tbody>
</table>

Proposed Outfalls 1, 2 and 5 consist of sheet flow discharge into Spring Creek. Velocities are well below erosive limits and will not require any additional erosion protection.

Proposed Outfall 3 consists of flow generated in subwatersheds A and D. The flow from subwatershed A is collected by a trench drain and curb inlet that discharge into a 24-inch diameter reinforced concrete pipe (Pipe 1). Pipe 1 flows
east along the north edge of the Transfer Station. Flow from subwatershed D is collected by a trench drain and curb inlet that discharge into the same 24-inch diameter reinforced concrete pipe (Pipe 2). Pipe 2 extends approximately 110 feet beyond the proposed property boundary and discharges into Spring Creek. The exit velocity from Outfall 3 is approximately 20.0 ft/sec. It is proposed that the erosion control measures approved by the City of Richardson Site Development Permit will be constructed at the point of discharge. These erosion control measures consist of a system of a riprap lined trapezoidal channel and riprap energy dissipation. Calculations for Pipe 1 and 2 are provided in Appendix III-C. This outfall will be constructed during construction of the proposed facility.

Proposed Outfall 4 consists of a shallow channel (Triangular Channel) that captures runoff from Sub Watershed E. The exit velocity from Outfall 4 is approximately 2.0 ft/sec. Velocities are well below erosive limits and will not require any additional erosion protection. Details on this channel can be found in Appendix III-C. This outfall will be constructed during construction of the proposed facility.

Proposed Outfall 6 consists of sheet flow that discharges into off-site drainage areas. Velocities are well below erosive limits and will not require any additional erosion protection.

Proposed Outfalls 7 and 8 consist of off-site sheet flow that discharges onto on-site drainage areas within the permit boundary. Velocities are well below erosive limits and will not require any additional erosion protection.

4.3.2. Phase 2

Within the Phase 2 permit boundary, there are four (4) on-site sub-watersheds (A-D) and one (1) off-site sub-watersheds (E). The proposed sub-watersheds are shown in Attachment III-2-2. Table III-3 summarizes the flow generated from each of the on-site and off-site sub-watersheds.
Table III-3 – Phase 2 Drainage Analysis

<table>
<thead>
<tr>
<th>SUB WATERSHED</th>
<th>t_c, min</th>
<th>Rainfall Intensity, in/hr</th>
<th>WATERSHED AREA, ac</th>
<th>RUNOFF COEFFICIENT, C</th>
<th>PEAK DISCHARGE, cfs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>9.4</td>
<td>1.58</td>
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<tr>
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<tr>
<td>C</td>
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<tr>
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<td>9.3</td>
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<tr>
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</tr>
</tbody>
</table>

Phase 2 sub-watersheds contribute flow to four (4) outfalls. Table III-4 summarizes the stormwater discharge at each outfall. The proposed outfalls are shown on Attachment III-2-2 and the velocity is noted for each outfall.

Table III-4 – Phase 2 - Discharge Summary

<table>
<thead>
<tr>
<th>POINT OF DISCHARGE</th>
<th>CONTRIBUTING DRAINAGE AREAS</th>
<th>TYPE OF FLOW</th>
<th>WATERSHED AREA, ac</th>
<th>PEAK DISCHARGE (cfs)</th>
<th>TOTAL DISCHARGE (cf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outfall 1</td>
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<td>4.4</td>
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</tr>
<tr>
<td>Outfall 2</td>
<td>C</td>
<td>Sheet</td>
<td>0.94</td>
<td>2.1</td>
<td>10,749</td>
</tr>
<tr>
<td>Outfall 3</td>
<td>A+D</td>
<td>Channel</td>
<td>3.55</td>
<td>26.4</td>
<td>66,312</td>
</tr>
<tr>
<td>Outfall 4</td>
<td>E</td>
<td>Sheet</td>
<td>0.99</td>
<td>4.0</td>
<td>11,321</td>
</tr>
</tbody>
</table>

Proposed Outfalls 1 and 2 consist of sheet flow discharge into Spring Creek. Velocities are well below erosive limits and will not require any additional erosion protection.

Proposed Outfall 3 consists of flow generated in subwatersheds A and D. The flow from subwatershed A is collected by a trench drain and curb inlet that discharge into a 24-inch diameter reinforced concrete pipe (Pipe 1). Pipe 1 flows east along the north edge of the Transfer Station. Flow from subwatershed D is collected by a trench drain and curb inlet that discharge into the same 24-inch diameter reinforced concrete pipe. (Pipe 2). Pipe 2 extends approximately 110 feet beyond the proposed property boundary and discharges into Spring Creek. The exit velocity from Outfall 3 is approximately 20 ft/sec. It is proposed that the erosion control measures approved by the City of Richardson Site Development Permit will be constructed at the point of discharge. These erosion control
measures consist of a system of a riprap lined trapezoidal channel and rip rap energy dissipation. Calculations for Pipe 1 and 2 are provided in Appendix III-C.

Proposed Outfall 4 consists of off-site sheet flow that discharges onto on-site drainage area B within the permit boundary. Velocities are well below erosive limits and will not require any additional erosion protection.

4.4. Flood Control Analysis

A small section of the property lies in the 100-year flood plain. Only filling in accordance with the approved CLOMR-F for construction of the roadway is proposed. No other construction or other portion of the facility is located within the 100-year floodplain. The 100-year flood plain is also shown in Attachment II-3. The appropriate FEMA flood map and associated CLOMR-F is included in Appendix II-A.

5. Waste Management Unit Design [§330.63(d)]

5.1. Storage and Transfer Units

5.1.1. Facility Sizing

The proposed transfer station facility is designed to receive and transfer a maximum of 1,500 tons of municipal solid waste per day (TPD). The facility is designed to allow dumping from collection vehicles or private citizen vehicles directly on the tipping floor from where the waste will be top loaded into the transfer trucks. There will be an elevation difference of approximately 18 feet between the tipping floor and the load out floor to allow for loading into the top of the transfer vehicles. The interior push walls in the building along the tipping floor will be constructed of reinforced concrete. The interior push walls allow waste to be stored against the walls and moved to the load-out area without the exterior walls of the building being damaged by waste handling equipment. The concrete push walls will be constructed to a height allowing up to 12 feet average depth of waste on the tipping floor for storage. The facility and equipment are designed for rapid transferring of materials and minimum detention of waste in the facility.
The existing facility will continue to operate during a portion of Phase 1. It has a current permitted capacity of 500 tons per day annual average (based on 365 days per year).

5.1.2. Storage Capacity and Maneuver Space

Although normal daily operations will not require extensive storage capacity, the proposed facility will be designed to provide floor storage capacity to provide maximum flexibility within the station for transfer operations downtime and collection vehicle peak delivery periods. All waste will be stored inside the building and shall not be allowed to result in a nuisance or public health hazards. While it is not expected, the facility is designed to provide storage capacity for approximately 900 tons of waste within the building. Materials will not be stored at the facility overnight except for extenuating emergency circumstances such as inclement weather or mechanical breakdown. Waste will remain at the site for a maximum of 3 days but the average length of time at the site will be 1 day or less. The facility will be washed down at least twice a week to prevent the creation of any nuisances or public health hazards.

The proposed facility is designed to contain any spills or contaminated water within the building and properly handle its disposal as described in Section 3.4 of this Part III.

While the existing transfer station remains in operation during Phase 1, used oil will continue to be received and stored in a double walled container adjacent to the current Maintenance Building as shown on Attachment III-0-1. This container is located within a concrete containment area to control any spills or run-off. When the Proposed Transfer Station is constructed, the used oil drop off/storage area will be relocated inside the transfer station building as shown on Attachment III-1. Used oil will be stored in a double-walled container until transported off-site to a recycler.

As the proposed facility is completely enclosed, it is important to provide adequate space for easy maneuvering of collection vehicles and loading equipment within the building. The building is designed for one-way traffic of
collection vehicles and citizens through the entrance door located on the east side of the building. Collection vehicles and private citizens will unload on the tipping floor. After unloading, collection and citizen vehicles will pull forward, and exit the building through an exit door on the west side of the building. The vehicles will have sufficient maneuvering space inside the building without interference with the tipping floor or storage area.

The existing facility will continue its current operations during a portion of Phase 1. The existing facility is designed for one-way traffic of collection vehicles, citizens and transfer vehicles. Collection vehicles will unload into the existing refuse storage pit or in the area immediately in front of the storage pit. After unloading, the collection vehicles will exit on to E. Lookout Drive. Citizens will unload at the existing citizen collection station adjacent to the existing maintenance building and exit onto E. Lookout Drive after unloading.

5.1.3. Facility Equipment

The primary piece of equipment to be operating at the proposed facility will be a wheeled loader used to handle waste on the tipping floor. The wheeled loader will push the waste directly into the transfer station loading hoppers or temporarily stockpile waste against the pushwalls while awaiting arrival of a transfer trailer truck to maneuver beneath the hopper area. An additional piece of equipment with a tamper will assist in clearing materials over the hopper and in spreading and compacting the waste in the transfer trailers.

During operation of the existing facility, waste will be loaded into transfer vehicles using the existing stationary compactors.

5.1.4. Facility Design Features

The proposed building floor and push walls in the tipping floor area will be constructed of reinforced concrete. The building frame and roof structure will be steel, and the entrance and exit doors on the east and west sides of the building will be designed as top hung sliding doors. Both the entrances will be 25 feet high and 20 feet wide.
The interior design of the proposed facility will incorporate floor drains and controls to collect contaminated water from waste or wash water from the tipping floor and direct the contaminated water to a sand/grease trap before discharging into the sanitary sewer system for treatment. Spills on the tipping floor will be contained and cleaned-up as required to minimize the amount of oil and grease entering the contaminated water sand/grease control system. The load out tunnel area will also be designed to collect and contain contaminated water, wash water and clean-up spill water. A system of sand/grease traps and a series of pumps will pump the contaminated water to the main conveyance system discharging to the sanitary sewer for treatment.

5.1.5. Unloading of Solid Waste

The unloading of waste will be performed in accordance with the Site Operating Plan (Part IV-A for the existing facility and Part IV-B for the proposed facility), Section "Waste Acceptance and Analysis (330.203)." In the event the transfer station is completely out of service, the collection vehicles and private citizens will be directed to an alternate transfer station or landfill.

6. Geology Report [§330.63(e)]

A Geology Report is not required for a Type V Solid Waste Transfer Station.

7. Groundwater Sampling and Analysis Plan [§330.63(f)]

A Groundwater Sampling and Analysis plan is not required for a Type V Solid Waste Transfer Station.

The facility has been designed to prevent discharge of pollutants into the water in the State of Texas or the waters of the United States, as defined by the Texas Water Code and the Federal Clean Water Act.

8. Landfill Gas Management Plan [§330.63(g)]

A Landfill Gas Management Plan is not required for a Type V Solid Waste Transfer Station.
9. **Closure Plan [§330.63(h)]**

9.1. **Existing Transfer Station**

Upon completion of construction and the implementation of operations at the proposed transfer station as described in Section 2 for Phase 1, the existing transfer station will be properly closed. This closure plan shall be applicable to this existing transfer station.

9.1.1. **Closure Requirements**

All waste, waste residues and any recovered materials shall be removed and properly disposed at an authorized facility. The facility and any equipment will be thoroughly washed and disinfected. The equipment will be dismantled or relocated to another appropriate site. All material on site (feedstock, recyclables, etc.) will be removed to the proposed facility or another authorized facility and storage areas disinfected. If there is evidence of any reportable release, the TCEQ Executive Director will be notified. Combustible materials, if any, stored outdoors must be transferred to an approved facility. Closure will be completed within 180 days following the most recent acceptance of waste materials or recyclables.

9.1.2. **Certification of Final Closure**

At least 90 days prior to the initiation of closure activities in the existing facility, NTMWD shall provide public notice of the facility closure in the newspaper of largest circulation in the City of Richardson. This notice shall provide the information required in 30 TAC §330.461 – Certification of Final Facility Closure. This information shall include the following:

- Name, address, and physical location of the facility.
- The permit number.
- The last date of intended receipt of waste.

NTMWD shall also provide an adequate number of copies of the approved final closure and post-closure plans for public access and review.
NTMWD shall also provide the Executive Director with written notification of the intent to close the facility. This notice shall become a part of the Operating Record.

Upon notification to the Executive Director, NTMWD shall place a sign at the site entrance notifying all persons who use the facility of the date of closure for the existing facility, and the prohibition against further receipt of waste at the Southern Tract after the closure date.

Upon notification to the Executive Director, suitable barriers shall be installed at all access points to the Southern Tract to prevent unauthorized dumping of solid waste at the closed facility.

Within 10 days following the completion of closure activities on the Southern Tract, NTMWD shall submit to the Executive Director by registered mail: a certification signed by an independent licensed professional engineer, verifying that closure of the Southern Tract has been completed in accordance with this closure plan. This submittal will include all applicable documentation necessary for certification of the final facility closure.

Post Closure Care will not be required for the Southern Tract since no waste will remain on the Tract and there are neither groundwater nor methane gas monitoring requirements, nor any final cover inspections for erosion or subsidence. Section 330.961(c)(3) is not applicable to the Southern Tract since the area will be removed from the Permit Boundary in Phase 2.

9.2. Closure of the Proposed Transfer Station in the Northern Tract

Upon completion of operations at the proposed transfer station as described it shall be properly closed.

9.2.1. Closure Requirements

All waste, waste residues and any recovered materials will be removed and properly disposed at an authorized facility. The facility and any equipment will be thoroughly washed and disinfected. The equipment will be dismantled or relocated to another appropriate site. The building may be demolished or left in
place. Any demolition waste will be properly disposed. All material on site (feedstock, recyclables, etc.) will be removed to an authorized facility and storage areas disinfected. If there is evidence of any reportable release, the TCEQ Executive Director will be notified. Combustible materials, if any, stored outdoors must be transferred to an approved facility. Closure will be completed within 180 days following the most recent acceptance of waste materials or recyclables. Closure of the facility will be completed within 180 days following the most recent acceptance of waste.

9.2.2. Certification of Final Closure

At least 90 days prior to the initiation of final closure activities, NTMWD shall provide public notice of the facility closure in the newspaper of largest circulation in the City of Richardson. This notice shall provide the information required in 30 TAC §330.461 – Certification of Final Facility Closure. This information shall include the following:

- Name, address and physical location of the facility.
- The permit number.
- The last date of intended receipt of waste.

NTMWD shall also provide an adequate number of copies of the approved final closure and post-closures plans available for public access and review.

NTMWD shall also provide the Executive Director with written notification of the intent to close the facility. This notice shall become a part of the Operating Record.

Upon notification to the Executive Director, NTMWD shall place a sign at the site entrance notifying all persons who may use the facility of the date of closure for the transfer station, and the prohibition against further receipt of waste at the transfer station after the closure date.
Upon notification to the Executive Director, suitable barriers shall be installed at all access points to prevent unauthorized dumping of solid waste at the closed facility.

Within 10 days following the completion of final closure activities, NTMWD shall submit to the Executive Director by registered mail: a certification signed by an independent licensed professional engineer, verifying that final closure has been completed in accordance with the approved closure plan. This submittal will include all applicable documentation necessary for certification of the final facility closure.

Post Closure Care will not be required for this facility as no waste will remain at the facility, and there are neither groundwater nor methane gas monitoring requirements, nor any final cover inspections for erosion or subsidence. Upon approval of Final Closure, NTMWD will submit a request for voluntary revocation of the permit.

10. **Post-Closure Plan [§330.63(i)]**

There are no post closure requirements applicable to this site, as it is not a MSW management unit and there will be no waste or waste storage units remaining on site.

11. **Cost Estimates for Closure and Post Closure [§330.63(j)]**

11.1. **Closure Cost Estimate**

Cost estimates are based on today’s dollars and on the costs required for a third party not affiliated with the NTMWD to perform all the required services to close the facility in accordance with 30 TAC §330.505 and 30 TAC §330.63(h). Closure cost estimates for closure of the existing and proposed facilities are provided in Appendix III-A.

An increase in the closure cost estimate and amount of financial assurance must be made if changes to the facility conditions increase the maximum cost of closure at any time during the active life of the facility.

A reduction in the closure cost estimate and amount of financial assurance may be approved if the cost estimate exceeds the maximum cost of closure at any time
during the remaining life of the facility and the owner or operator has provided written notice to the Executive Director of the detailed justification for the reduction of the closure cost estimate and the amount of financial assurance.

11.2. **Post-Closure Cost Estimate**

There is no Post-Closure Estimate required.

11.3. **Financial Assurance**

Documentation to demonstrate financial assurance is included as Appendix III-B.
APPENDIX III-A

CLOSURE COST ESTIMATE
## APP III-A
### CLOSURE COST ESTIMATE
#### PROPOSED LOOKOUT DRIVE TRANSFER STATION (NORTHERN TRACT)

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
<th>Unit Cost</th>
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</tr>
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<td><strong>2.0 Dismantling Process Units</strong></td>
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**TOTAL ESTIMATED CLOSURE COST**

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APPENDIX III-E

BASIS OF TRANSFER STATION DESIGN CAPACITY
NORTH TEXAS MUNICIPAL WATER DISTRICT
LOOKOUT DRIVE TRANSFER STATION
RICHARDSON, TEXAS
COLLIN COUNTY

APPENDIX III-E
Basis of Transfer Station Design Capacity

PERMIT AMENDMENT
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
PERMIT NO.: MSW 53A

OCTOBER 2012

Applicant:
North Texas Municipal Water District
PO Box 2408
Wylie, Texas 75098

Prepared by:
CP&Y Inc.
1820 Regal Row, Suite 200
Dallas, Texas 75235
Firm No: 1741
# TABLE OF CONTENTS

1. **Existing Lookout Drive Transfer Station Basis of Design Capacity** ............ 2  
   1.1. Station Throughput Capacity................................................................. 2  
      1.1.1. Ability to load Transfer Trailers.................................................... 2  
      1.1.2. Ability to deliver waste to the facility ........................................... 2  
      1.1.3. Maximum Throughput........................................................................ 3  
   1.2. Station Storage Capacity ........................................................................ 3  

2. **Proposed Lookout Drive Transfer Station Basis of Design Capacity** ......... 4  
   2.1. Station Throughput Capacity................................................................. 4  
      2.1.1. Ability to load Transfer Trailers...................................................... 4  
      2.1.2. Ability to deliver waste to the facility ............................................ 5  
      2.1.3. Maximum Throughput...................................................................... 5  
   2.2. Station Storage Capacity ...................................................................... 6
1. **Existing Lookout Drive Transfer Station Basis of Design Capacity**

Based upon the SOP, the maximum operating hours for waste acceptance is between the hours of 7 AM and 7 PM (12 hours) and the maximum operating hours for waste transfer is between the hours 5 AM and 9 PM (16 hours). However, for purposes of determining waste transfer design capacity, a conservative 12-hour operating period will be used.

1.1. **Station Throughput Capacity**

The throughput capacity is based upon: (1) ability to load Transfer Trailers; and (2) ability to deliver waste to the facility.

1.1.1. **Ability to load Transfer Trailers**

- Utilizing a stationary compactor loading method, a transfer trailer can be positioned and loaded within approximately 30 minutes (2 loads per hour per compactor).
- Utilizing rear loading transfer trailers, each vehicle can carry an average net payload of 16.75 tons.
- Each compactor can load 33.5 tons per hour (TPH) (2 loads per hour x 16.75 tons per load)
- There are 2 compactors utilized at the existing transfer station.

Therefore, the Station daily load-out capacity is calculated as **804 tons per day (TPD)**. (33.5 TPH per compactor x 2 compactors x 12 hour transfer period per day)

1.1.2. **Ability to deliver waste to the facility**

- Each collection vehicle can unload in 10-15 minutes (4-6 loads per unloading bay per hour). For calculation use an average of 5 loads per unloading bay per day.
- Each collection vehicle can carry an average net payload of 5 tons.
• Each unloading bay can accommodate 25 TPH (5 loads per bay per hour x 5 tons per load)

• The transfer station width at the unloading area for collection vehicles is approximately 90 feet. Assuming there is 15 feet of space on each side of the unload area that cannot be used for unloading, there would be an unloading area approximately 60 feet wide. Assuming an unloading bay width of 15 feet for each vehicle (9 feet wide vehicle with space), the unloading area for collection vehicles can accommodate a maximum of 4 vehicles unloading at any one time (4 unloading bays).

Therefore the theoretical maximum waste unloading capacity would be 1200 TPD (25 TPH per unloading bay x 4 unloading bays x 12 hour period).

1.1.3. Maximum Throughput

Based on these stated assumptions, the theoretical maximum daily throughput capacity of the Existing Lookout Transfer Station is 804 TPD. This is in excess of the 500 TPD average permitted in the current permit and the 750 TPD average permitted in the proposed permit.

1.2. Station Storage Capacity

The area of the existing transfer station tipping floor, within the building structure, available for the storage of waste is approximately 90’ x 40’. Waste in this area can be stored at an average depth of 12’. The volume of waste that can be stored on the tipping floor is approximately 43,200 ft$^3$ or 1,600 yd$^3$.

The area in the pit below the tipping floor is also available for storage of waste and is approximately 60’ x 28’. The pit is approximately 10’ deep and waste can be stored an additional 6’ above the top of the pit. The volume of waste that can be stored in the pit is approximately 26,880 ft$^3$ or 996 yd$^3$. 
Assuming solid waste density of 350 lbs/yd$^3$ the existing transfer station can store approximately 454 tons of solid waste within the building structure.

$$\text{tons} = \frac{(1600 \text{yd}^3 + 996 \text{yd}^3) \times 350 \text{ lbs per yd}^3}{2000 \text{ lbs per ton}}$$

Based on these stated assumptions, the theoretical maximum storage capacity of the existing Lookout Transfer Station, within the building structure, is 454 tons. Additional storage space is available on the tipping floor in front of the building if necessary.

2. Proposed Lookout Drive Transfer Station Basis of Design Capacity

Based upon the SOP, the maximum operating hours for waste acceptance is between the hours of 7 AM and 7 PM (12 hours) and the maximum operating hours for waste transfer is between the hours 5 AM and 9 PM (16 hours). However for the purposes of determining waste transfer design capacity, a conservative 12 hour operating period will be used.

2.1. Station Throughput Capacity

The throughput capacity is based upon: (1) ability to load Transfer Trailers; and (2) ability to deliver waste to the facility.

2.1.1. Ability to load Transfer Trailers

- Utilizing the open top loading method a transfer trailer can be positioned and loaded within 10-15 minutes (4-6 loads per hour per load-out area). For calculation use an average of 5 loads per load-out area per hour.
- Utilizing top loading transfer trailers, each vehicle can carry an average net payload of 20 – 22 tons. For calculation use an average of 21 tons.
• Each load-out area can load 80-132 TPH (4-6 loads per hour x 20-22 tons per load). For purposes of the design capacity calculation use an average of 105 TPH per load-out area (5 vehicles per hour x 21 tons per load).

• There are 2 load-out areas utilized at the existing transfer station.

Therefore the Station daily load-out capacity is calculated as **2520 TPD** (105 TPH per load-out area x 2 load-out areas x 12 hour transfer period per day).

2.1.2. Ability to deliver waste to the facility

• Each collection vehicle can unload in 10-15 minutes (4-6 loads per unloading bay per hour). For calculation use an average of 5 loads per unloading bay per hour.

• Each collection vehicle can carry an average net payload of 5 tons.

• Each unloading bay can accommodate 25 TPH (5 loads per unloading bay per hour x 5 tons per load).

• The transfer station width at the unloading area for collection vehicles is approximately 160 feet. Assuming there is 15 feet of space on each side of the unload area that cannot be used for unloading, there would be an unloading area approximately 120 feet wide. An unloading bay width of 15 feet for each vehicle (9 feet wide vehicle with space), the unloading area for collection vehicles can accommodate a maximum of 8 vehicles unloading at any one time (8 unloading bays).

Therefore the theoretical maximum waste unloading capacity would be **2400 TPD** (25 TPH per unloading bay x 8 unloading bays x 12 hour period).

2.1.3. Maximum Throughput

Based on these stated assumptions, the theoretical maximum daily throughput capacity of the proposed Lookout Transfer Station is **2400 TPD**. This is in excess of the 1500 TPD maximum throughput in the proposed permit.
2.2. **Station Storage Capacity**

The area of the existing transfer station tipping floor available for the storage of waste is approximately 145' x 100'. Waste in this area can be stored at an average depth of 12'. The volume of waste that can be stored on the tipping floor is approximately 174,000 ft$^3$ or 6,444 yd$^3$.

Assuming solid waste density of 350 lbs/yd$^3$, the transfer station can store approximately 1,127 tons of solid waste.

\[
\text{tons} = \frac{6444 \text{yd}^3 \times 350 \text{ lbs per yd}^3}{2000 \text{ lbs per ton}}
\]

Therefore, based on these stated assumptions, the theoretical maximum storage capacity of the existing Lookout Transfer Station is **1,074 tons**, which is in excess of the proposed maximum storage capacity of 900 tons.
PART III ATTACHMENTS
NORTH TEXAS MUNICIPAL WATER DISTRICT

LOOKOUT DRIVE TRANSFER STATION

RICHARDSON, TEXAS

COLLIN COUNTY

PART IV – A
Site Operating Plan for the Existing Facility

PERMIT AMENDMENT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PERMIT NO.: MSW 53A

OCTOBER 2012
REVISION 1

Applicant:

North Texas Municipal Water District
PO Box2408
Wylie, Texas 75098

Prepared by:

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# TABLE OF CONTENTS

1. Introduction .................................................................................................................. 1
2. Training Requirements .................................................................................................. 1
3. Waste Acceptance and Analysis (§330.203) .................................................................. 1
4. Facility-Generated Wastes (§330.205) ......................................................................... 7
5. Contaminated Water Management (§330.207) ................................................................. 7
6. Waste Storage Requirements (§330.209) ...................................................................... 8
7. Approved Waste Containers (§330.211) ........................................................................ 9
8. Citizen’s Collection Stations (§330.213) ....................................................................... 9
9. Requirements for Stationary Compactors (§330.215) .................................................... 9
10. Pre-Operation Notice (§330.217) ............................................................................... 10
11. Recordkeeping and Reporting Requirements (§330.219) ............................................. 10
12. Fire Protection (§330.221) .......................................................................................... 11
13. Access Control (§330.223) ......................................................................................... 13
15. Spill Prevention and Control (§330.227) ...................................................................... 14
16. Facility Operating Hours (§330.229) .......................................................................... 14
17. Facility Sign (§330.231) ............................................................................................. 15
18. Control of Windblown Material and Litter (§330.233) ................................................. 15
19. Materials Along the Route to the Facility (§330.235) .................................................. 16
20. Facility Access Roads (§330.237) ............................................................................... 16
21. Noise Pollution and Visual Screening (§330.239) ......................................................... 16
22. Overloading and Breakdown (§330.241) ...................................................................... 17
23. Sanitation (§330.243) ................................................................................................. 17
24. Ventilation, Odor and Air Pollution Control (§330.245) .............................................. 18
25. Health and Safety (§330.247) ..................................................................................... 19
26. Employee Sanitation Facilities (§330.249) .................................................................. 19
27. Disease Vector Control ............................................................................................... 19
28. Salvaging and Scavenging ......................................................................................... 19
29. Endangered Species Protection .................................................................................. 20
1. **Introduction**

This portion (Part IV-A) of the Site Operating Plan (SOP) is applicable to waste management operations during the portion of Phase 1 when waste management operations are conducted in the Existing Facility. Part IV-A shall no longer be applicable once operations have moved to the Proposed Facility. At no time will waste management operations be conducted at both buildings concurrently. This Site Operating Plan (SOP) contains information about how the North Texas Municipal Water District (NTMWD) will conduct operations at the facility, but is not intended to be a comprehensive operating manual. The SOP represents the general instruction for facility management and personnel to operate the facility in a manner consistent with the approved design and the Texas Commission on Environmental Quality (TCEQ) rules to protect human health and the environment and prevent nuisances.

The SOP is Part IV of the MSW permit/registration application and consists of the information required by Title 30, Texas Administrative Code (TAC), Chapter 330, Subchapter E: Operational Standards for Municipal Solid Waste Storage and Processing Units, 30 TAC §330.201–§330.249. At a minimum, the SOP includes provisions for facility management and operating personnel to meet the general and site-specific requirements of these rules.

2. **Training Requirements**

A copy of the personnel training records and MSW Operator Administrative Licenses will be maintained at the NTMWD office located at 505 E. Brown Street in Wylie, Texas. At least one NTMWD employee will possess a Class A or Class B Municipal Solid Waste operator license. If a licensed operator is not on-site during all transfer station operating hours, a licensed operator will be available by telephone.

3. **Waste Acceptance and Analysis (§330.203)**

**Authorized Wastes**

The transfer station may receive residential, commercial, construction or demolition and Class 2 and Class 3 industrial non-hazardous municipal solid waste. No industrial
hazardous wastes or Class 1 industrial waste will be accepted at the facility. No special wastes, other than used oil, will be accepted at the facility. Small quantities of special wastes may inadvertently be received if they are unidentified and included as part of the mixed municipal waste stream. These wastes, if identified, will be separated and will not be accepted.

Recyclables may also be accepted and temporarily stored on-site until transported off-site for processing. There are no constituents or characteristics of the waste that would be a limiting parameter that would impact or influence the design and operation of the facility. Up to 40 cy of tire recyclables and 40 cy of white good recyclables will be stored on site. Tires accepted for recycling shall be managed in accordance with applicable requirements prescribed in 30 TAC Chapter 328, Subchapter F.

An annual average of 750 tons per day (based upon 365 days per year) of municipal solid waste will be received at the site for subsequent transfer and disposal or recycling at an appropriate facility. Less than 5 percent, by weight, of this waste is composed of Class 2 or Class 3 industrial waste. The remainder is municipal solid waste. The maximum amount of stored waste capacity is approximately 450 tons within the existing building. The maximum length of time that waste will be stored at the facility will not exceed 3 days. The average time will be 1 day. Solid waste will not be stored overnight at the facility except for extenuating emergency situations such as inclement weather or mechanical breakdown.

Waste received at the site is transferred to a Type I Municipal Solid Waste Landfill for disposal.

Sludges are not accepted at the facility.

Used oil will be temporarily stored in a container until transported off-site by an authorized hauler to an approved oil recycling facility. The container’s size and material may vary if the container is replaced. The container shall be made of steel, HDPE, or other material compatible with the storage of used oil, be double walled or have sufficient secondary containment to contain the entire volume of the container, and have a maximum capacity of 1,000 gallons. The container will be located as shown on
Attachment II-3-1 and is protected from vehicle traffic by an existing raised curb. The used oil will be removed from the site at least quarterly.

Contaminated water will be sampled and handled in accordance with the Contaminated Water Plan presented in this site operating plan.

**Receipt of Large Items**

Items that can be classified as large, heavy or bulky can include white goods (household appliances), air conditioning units, metal tanks, large metal pieces, etc. These items may be accepted, however, they may also be accepted for recycling if the likelihood exists for damage to the transfer trailers. If accepted for recycling, these items will be placed in designated roll off container(s) with a maximum capacity of 40 cy each. The containers will be located in the recyclable materials area as shown on Attachment II-3-1. When sufficient quantities are accumulated, the containers will be transported off-site to an authorized facility for recycling. They will be stored onsite for a maximum of 90 days. They will be removed as needed to prevent nuisance conditions.

**Prohibited Wastes**

Wastes authorized above will not contain, nor will the transfer station accept, the following for disposal:

- Regulated Hazardous Waste other than from Conditionally Exempt Small Quantity Generators (CESQG). Municipal hazardous waste from a CESQG may be accepted; provided the generator provides a certification that it generates no more than 220 pounds of hazardous waste per calendar month.

- Polychlorinated Biphenyl (PCB) wastes, as defined under 40 Code of Federal Regulations, Part 761.

- Used-oil filters from internal combustion engines (except for recycling)

- Whole used or scrap tires (except for recycling)

- Items containing chlorinated fluorocarbons (CFC’s), such as refrigerators, freezers, and air conditioners, will only be accepted at the site if the generator or transporter provides written certification that the CFC has been evacuated from
the unit and that it was not knowingly allowed to escape into the atmosphere. These appliances may be accepted at the discretion of NTMWD staff and stored until a certified operator can remove the CFC and certify that it has been properly evacuated.

- Liquid waste which does not pass EPA Method 9095 Paint Filter Test shall not be accepted unless it is bulk or non-containerized liquid waste that is:
  - household waste other than septic waste; or
  - contained liquid waste and the container is a small container similar in size to that normally found in the household waste;
  - the container is designated to hold liquids for use other than storage.

- Regulated Asbestos Containing Materials

Procedures for the Detection and Prevention of Hazardous and PCB Waste

Procedures for the detection and prevention of the disposal of the following: regulated hazardous waste as defined in 40 CFR Part 261; and polychlorinated biphenyl (PCB) wastes as defined in 40 CFR Part 761 are listed below.

Random visual inspections of incoming waste will be conducted. The following summarizes the inspection process.

A. Inspection Procedures

Since the facility will operate with a minimum number of personnel, all site staff will be trained in the screening inspection process and will receive training on random inspection guidelines. All training will be documented and will become part of the operating record of the site.

Although the inspection location may vary, all inspections will be made in areas where containment is provided and/or potential spills of unauthorized waste would be minimized.

Vehicle inspection is at the discretion of the inspector. However, vehicles that deliver commercial and Class 2 and Class 3 industrial waste will be considered for inspections. Such vehicles typically include front-end loaders, commercial
rear-end loaders, side loaders, trucks with roll-off boxes, stake-bed trucks, dump trucks, pick-up trucks, and pick-up trucks with trailers transporting non-household wastes.

Vehicles containing suspicious loads will be inspected. Suspicious loads may include:

- Drums or containers with warning labels
- Loads which have a visible emission, smoke, strong chemical odor, or cause physical symptoms (e.g., irritation of eyes, nose, throat, skin, nausea, dizziness, or headache),

The inspector will not inspect any vehicle that appears to present possible physical danger. The Foreman or his designee shall be contacted immediately if such a load enters the facility.

The Foreman or his designee shall determine when to conduct inspections of incoming loads. The inspections shall be conducted in a manner that allows the inspector to view all contents of the waste load. However, there may be some situations where it is not feasible to view the entire contents of the waste load (e.g. baled wastes). In these situations, the inspector shall make an effort to view as much as possible and note on the inspection form that all material was not visible and state the reason why. The inspections shall be conducted in an expeditious manner to minimize disruption to normal operations.

B. Management of Regulated Wastes

If the waste is not readily identifiable, is hazardous, unacceptable or contains regulated levels of PCB's, the load will be rejected. The inspector will make an effort to determine whether the waste is acceptable for disposal by performing at least one of the following: 1) questioning the transporter about the origin of the waste, 2) contacting the generator, 3) reviewing paperwork; e.g. manifests, trip tickets, material safety data sheets (MSDS's), or 4) using knowledge based on container packaging labels. If the load is acceptable, the inspector will then
complete a Random Waste Screening Report, the driver will be allowed to leave, and the waste moved to the tipping area.

Should an incident occur where regulated hazardous waste, PCBs, radioactive, or other prohibited wastes are suspected or discovered, the waste will not be accepted. Such material will be isolated until it can be identified to determine the proper disposition or handling procedures. During this identification process, the generator or generator representative will be contacted to determine the origin and identity of the material. If the material is determined to be a regulated hazardous waste or contains regulated levels of PCBs, radioactive or other prohibited material, the TCEQ Region 4 office will be verbally notified of the incident and the planned disposition of the material. Proper disposition of the prohibited waste will be specific to that waste and will be implemented upon TCEQ concurrence.

If the waste is regulated hazardous, contains PCBs above regulated levels, or is unacceptable for disposal as determined by the facility personnel, the load will be rejected. The Foreman or his designee will determine how to manage the unacceptable materials based on regulations, permit restrictions, and the District’s policies and procedures for waste acceptance. Regulated hazardous wastes and regulated PCB wastes discovered during the inspection must be disposed of off-site at a permitted treatment, storage and disposal facility.

In rare cases where the transporter or generator cannot be identified and the facility has accepted a: 1) regulated hazardous, 2) regulated PCB-containing waste, or 3) unauthorized waste, the District or the facility operator, will be responsible for meeting applicable federal, state, and local regulations in the removal and proper disposal of the waste.

C. Training

Employee training for random load inspections will be incorporated with other training programs (e.g., safety meetings).
D. Health and Safety

Safety precautions and personal protective equipment appropriate for the situation shall be used by the inspectors during inspections. The facility operator will follow recommended site safety precautions to be taken during the inspection.

E. Record Keeping

All inspection records, training procedures, notification procedures and records relating to the hazardous and PCB waste detection and prevention program will be maintained in the facility's operating record.

4. Facility-Generated Wastes (§330.205)

Wastes generated by the transfer station will be processed or disposed at an authorized solid waste management facility. The only solid wastes generated onsite are typical office wastes. It is not anticipated that any solid wastes will be generated at the facility that cannot be properly handled at the 121 Regional Disposal Facility (121 RDF) landfill.

Wastewaters generated by the transfer station will be managed in accordance with §330.207, Contaminated Water Management. All building wash down water, truck washing water and contaminated surface water is currently collected, passed through a grease/sand trap, and discharged into the City of Richardson wastewater collection system for treatment.

No sludges are generated onsite.

5. Contaminated Water Management (§330.207)

All liquids resulting from the operation of the transfer station, including tipping floor wash down water and water that has come in contact with waste, will be disposed of in a manner that will not cause surface water or groundwater pollution. Any water that contacts with waste or contaminated water will be contained and disposed of into the City of Richardson sanitary sewer system. Contaminated water will be collected and contained until properly managed.
This facility does not process grease trap waste, grit trap waste, or septage; and is not a mobile liquid waste processing unit.

Off-site discharge of contaminated waters to surface waters will be made only after approval under the Texas Pollutant Discharge Elimination System authority.

Wastewaters discharged to a treatment facility permitted under Texas Water Code, Chapter 26 will not:

1. interfere with or pass-through the treatment facility processes or operations
2. interfere with or pass-through its sludge processes, use, or disposal
3. otherwise be inconsistent with the prohibited discharge standards, including 40 Code of Federal Regulations Part 403, General Pretreatment Regulations for Existing and New Source Pollution

The daily effluent design standard for oil and grease concentration leaving the facility and entering a public sewer system will not exceed 200 milligrams per liter or the concentration established in the wastewater discharge permit pretreatment limit or the concentration established by the treatment facility permitted under Texas Water Code, Chapter 26, and the National Pollutant Discharge Elimination System. This meets the requirements of 30 TAC 330.207(g). In addition, the current facility does not require a wastewater permit as the quantity of water discharged to the sanitary sewer system is less than the amount that is required to have a permit.


All solid waste will be stored in such a manner that it does not constitute a fire, safety, or health hazard or provide food or harborage for animals and vectors, and shall be contained within the tipping area. The tipping area is sized to contain the solid wastes delivered and transferred daily. Materials received for recycling will be stored in an area separate from the transfer station building. These materials will be stored in containers or areas appropriate for the material. These material storage areas will be inspected weekly for ponding water and the harborage of vectors. Any ponded water will be promptly removed. Vectors will be discouraged by maintaining a clean and neat area,
and by removal of items once sufficient quantities are accumulated to warrant off-site
transport.

Based on calculations in Appendix III-E, the transfer station has a throughput capacity
of at least 800 tons per day (tpd) of waste. This throughput is not intended to be a
limiting amount. A maximum of approximately 450 tons of waste can be stored inside
the building at the facility. The maximum length of time waste will be stored on the
tipping floor will not exceed 72 hours. Non-stored wastes will be transported daily to the
NTMWD 121 RDF landfill. In the event that the 121 RDF landfill is not able to receive
the waste for disposal, waste will be transported to another TCEQ approved disposal
facility.

7. **Approved Waste Containers (§330.211)**

Solid waste that is received containing food wastes will be placed in a covered area or
in a receiving area where any runoff is collected and properly handled. The receiving
area will be maintained in a clean condition so that it does not constitute a nuisance and
retards the harborage, feeding, and propagation of vectors. The transfer trailers are
designed to prevent spillage or leakage during storage, handling or transport.

8. **Citizen's Collection Stations (§330.213)**

A citizen’s collection area is located on the site, separate from the Transfer Station
Building, but within the permit boundary. This area consists of a concrete pit with
access for depositing waste on two sides of the pit. Rules are posted governing the use
of the facility to include who may use it, and what may or may not be deposited. The
waste received in the pit is transported to the transfer station building on an as-needed
basis.


The stationary compactors used to load the transfer vehicles shall be operated and
maintained in such a way as not to create a public nuisance through material loss or
spillage, odor, vector breeding or harborage, or other condition. The transfer station
operates two (2) compactors to load the transfer vehicles. The compactors are located on the east side of the existing transfer station building.

10. **Pre-Operation Notice (§330.217)**

This is not a Type V mobile liquid processing unit or a Type VI demonstration project.

11. **Recordkeeping and Reporting Requirements (§330.219)**

A copy of the permit, the approved permit application and all other related or required plans or documents will be maintained at the NTMWD administrative offices located at 505 E. Brown Street in Wylie, Texas during the active life of the site and shall be considered a part of the site operating record of this facility. In addition, information and data shall be recorded, as appropriate, in the operating record to be retained at the site during the active life of the site. Upon request by the Executive Director, all such documents will be furnished and made available for inspection at all reasonable times. The information listed in Table 1 will be recorded and retained in the operating record for the life of the facility.

<table>
<thead>
<tr>
<th>Records To Be Maintained</th>
<th>Rule Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Location restriction demonstration</td>
<td>§330.219(b)(1)</td>
</tr>
<tr>
<td>2 Inspection records and training procedures</td>
<td>§330.219(b)(2)</td>
</tr>
<tr>
<td>3 Closure Plan and any monitoring testing or analytical data related to closure requirements</td>
<td>§330.219(b)(3)</td>
</tr>
<tr>
<td>4 Cost Estimates and financial assurance documents for closure.</td>
<td>§330.219(b)(4)</td>
</tr>
<tr>
<td>5 Copies of all correspondence and responses relating to the operation of the facility, modifications to the permit/registration, approvals, and other matters pertaining to technical assistance</td>
<td>§330.219(b)(5)</td>
</tr>
<tr>
<td>6 All documents, manifests, shipping documents, trip tickets, etc., involving special waste</td>
<td>§330.219(b)(6)</td>
</tr>
<tr>
<td>7 Any other document(s) as specified by the approved permit/registration or by the executive director</td>
<td>§330.219(b)(7)</td>
</tr>
<tr>
<td>8 Access Control Inspection and Maintenance</td>
<td>§330.223</td>
</tr>
<tr>
<td>9 Daily Control of On-Site Windblown Material and Litter</td>
<td>§330.233</td>
</tr>
<tr>
<td>10 Policing Materials Along the Route to the Facility</td>
<td>§330.235</td>
</tr>
<tr>
<td>11 Dust Nuisance Control Efforts</td>
<td>§330.237(b)</td>
</tr>
<tr>
<td>12 Salvaged Material Storage Nuisance Control Efforts</td>
<td>§330.209(b)</td>
</tr>
<tr>
<td>13 Documents pertaining to the Odor Management Plan</td>
<td>§330.245</td>
</tr>
</tbody>
</table>
These records will be placed in the operating record within seven working days or upon receipt of analytical data as appropriate. An authorized representative will sign all reports and other information requested by the Executive Director in accordance with §330.219(c).

12. **Fire Protection (§330.221)**

Burning is not permitted at the site. Since the waste will be placed into trailers, the walls of the trailers will act as a horizontal firebreak and minimize the possibility of a fire spreading to adjacent areas. Fire extinguishers will be kept on all equipment and in the building. The site currently receives potable water from the City of Richardson. There is an adequate supply of pressurized water to fight fires as needed. All personnel will be annually trained in the contents and use of the following Fire Protection Plan. The training will include the use and operation of on-site firefighting equipment.

**Fire Protection Plan**

The following steps are taken regularly at the facility by designated personnel to prevent fires:

- Operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Equipment used to move waste will be routinely cleaned through the use of water or steam cleaners. The water or steam cleaning will remove combustible waste and caked material which can cause equipment overheating and increase fire potential.
- Smoking is only permitted in designated areas away from the waste management areas.

**Source of Fire Prevention**

- Fire extinguishers will be kept on rolling heavy equipment and in addition one will be stored inside the transfer station. All fire extinguishers will be fully charged and ready for use at all times. All fire extinguishers will be inspected periodically and recharged as needed,
- The City of Richardson Fire Department will be a source of fire protection.
Fire Protection Use Procedures

- When using a fire extinguisher, stand up-wind from the fire, pull the pin, and aim the hose or nozzle toward the base of the fire.
- Call 911 to notify the City of Richardson Fire Department, if appropriate.

General Rules for Fire Fighting

- Alert other facility personnel.
- Contact the City of Richardson Fire Department, if appropriate.
- Assess extent of fire and possibility to spread and alternatives for extinguishing the fire.
- Do not attempt to fight a fire alone.
- Do not attempt to fight a fire without adequate personal protective equipment.
- Be familiar with the use and limitation of the fire fighting equipment.
- If it appears that the fire can be safely fought with available fire fighting devices until the Fire Department arrives, attempt to contain or extinguish the fire.
- Upon arrival of the Fire Department personnel, direct them to the fire and provide assistance, if requested by Fire Department personnel.

Employee Fire Protection Training and Safety Procedures

- All facility personnel will be trained on fire extinguisher use and capabilities.
- All facility personnel will be trained on the general rules for fire fighting.

Notice Requirements

- In the event of a fire which cannot be extinguished within 10 minutes of discovery, the TCEQ shall be notified according to the following:
  - Contact the TCEQ regional office by phone within 4 hours of discovery.
  - Notify the TCEQ regional office in writing within 14 days of the fire.

The Fire Protection Plan complies with the local City of Richardson Fire Code.
13. **Access Control (§330.223)**

**Facility Security**

Access to the site will be controlled at the Scale House near the entrance and by site fencing to minimize unauthorized vehicular traffic, unauthorized and illegal dumping, and public exposure to hazards associated with waste management. A scale operator will be on-site during operating hours. The entrance gate will be locked when the site is not in operation. Access to the remainder of the site is controlled by a perimeter fence.

**Vehicle Access**

Appropriate signs will be provided to indicate where vehicles are to unload. Public access to the facility will be by way of Lookout Drive which is a 4 lane divided asphalt all-weather roadway. This roadway is designed with adequate turning radii to safely handle the vehicles expected at the facility. Only vehicles authorized by the facility Foreman, personnel vehicles, and authorized haul vehicles will have access beyond the facility entrance. Signage will provide direction to customers and the public at the entrance of the facility. Additional signage within the facility will provide direction to public unloading areas. Parking areas are provided on site for equipment, employees and visitors. The access roadway, interior roadways and unloading areas are all-weather construction to minimize dust and mud.


The unloading of solid waste will be confined to as small an area as practical and within in the confines of the transfer station tipping area or the Citizen Collection area. A facility employee will monitor all incoming loads of waste before they are loaded into the transfer trailers. The unloading of prohibited wastes will not be allowed. Monitoring of incoming loads of waste will mitigate the potential for receipt of prohibited wastes. Any prohibited wastes will be returned promptly to the transporter or generator of the waste.

The unloading of waste in unauthorized areas is prohibited. Any waste deposited in an unauthorized area will be removed immediately and managed properly. Certain wastes are prohibited from management at the facility. Prohibited wastes are described in Section 330.203 of this plan. The unloading of prohibited wastes at the facility will not
be allowed. Any prohibited waste not discovered until after unloading will be placed back in the offending transporter's vehicle, if possible, or otherwise returned promptly to the transporter or generator of the waste.

15. **Spill Prevention and Control (§330.227)**

The transfer station site is designed to capture any wash down water and contaminated water, and direct it to the sanitary sewer system through a system of area grates, as previously discussed. These grates were designed to accommodate a 25 year, 24 hour storm runoff for the transfer station area not within the building. The transfer facility does not accept sludges or liquid wastes, and therefore does not expect a “worst case spill”.

16. **Facility Operating Hours (§330.229)**

The maximum facility waste acceptance hours will be Monday - Saturday 7:00 am - 7:00 pm. Site operations, such as cleaning the tipping floor, completion of truck loading and housekeeping may be performed outside of normal waste acceptance hours. The facility and the operation of heavy equipment at the site will be prohibited between the hours of 9 pm to 5 am unless specific authorization is provided. The information on hours and days of operation will be posted at the entrance to the facility.

In addition, upon authorization by the TCEQ, the transfer station may utilize alternative operating hours to accommodate special occasions, special purpose events, holidays, or other special occurrences.

When warranted, the Solid Waste System Manager or his designee will request approval from the commission's regional office to allow additional temporary operating hours to address disaster or other emergency situations, or other unforeseen circumstances (such as traffic delays or adverse weather) that could result in the disruption of waste management services in the area. The Solid Waste System Manager or his designee will document the reason or reasons for the delay for each day on which a delay occurs and place the documentation in the operating record. In addition to the waste acceptance and operating hours, other non-waste management
activities including administrative, repair and maintenance activities may occur twenty-four hours per day, seven days per week.

17. **Facility Sign (§330.231)**

A conspicuous sign measuring a minimum four feet by four feet will be maintained at the entrance to the facility. The sign states, in letters at least three inches high, the following information:

- Name and Type of MSW Facility: Lookout Drive Transfer Station
- TCEQ Permit Number: MSW 53A
- Hours of Operation: Monday through Saturday 7:00AM to 7:00PM
- Emergency 24-hour Contact Number: (972) 442-5405
- Local Emergency Fire Department Number: 911

The sign will be visible and readable from the facility entrance. The sign will also state a list of all unauthorized or prohibited waste at the facility. Additional signs regarding site rules, such as speed limits and exclusion of regulated hazardous and unacceptable wastes, will also be posted as appropriate.

Signs prohibiting smoking will be posted near the facility entrance or scale house. A sign will be prominently displayed at the facility entrance stating that all loads shall be enclosed, covered, or secured unless the load can not blow or spill over the top of the load-carrying compartment. The District will take steps to encourage that vehicles hauling waste to the facility are enclosed or provided with a tarpaulin, net, or other means to effectively secure the load in order to prevent the escape of any part of the load by blowing or spilling. The operator will take actions such as posting signs, reporting offenders to proper law enforcement officers, adding surcharges, or similar measures.

18. **Control of Windblown Material and Litter (§330.233)**

Policing of litter and fugitive debris at the facility entrance area along Lookout Drive will be performed as part of a scheduled routine. Any litter scattered throughout the site, including along fences and access roads, and at the gate will be collected at least daily.
on the days the facility is in operation or more often as necessary to maintain aesthetic conditions and minimize vector attraction and fire hazards. All collected material will be returned to the transfer station. Should windblown debris become a problem, portable fences or other measures will be implemented to control fugitive debris.

19. **Materials Along the Route to the Facility (§330.235)**

The District will use its own employees or contract labor for litter removal. Litter will be policed around the entire site perimeter and for a distance from the site entrance for 2.0 miles within the public right-of-way along Lookout Drive and Plano Road (SH 5) in either direction. Inspections of and collection of spilled material on major roadways will occur at least once per day when the facility is in operation. The City of Richardson has maintenance responsibility / authority over all of the roadways providing access to the facility. Therefore, there is no requirement to coordinate with TxDOT.

20. **Facility Access Roads (§330.237)**

On-site roads for transfer and collection vehicles will be paved with asphalt or concrete to provide all-weather access. The roads will be free draining. Site personnel will remove mud and trash from the paved on-site access roads periodically to minimize the tracking of mud and trash onto public roadways. Access roadways will be maintained, as necessary, to minimize depressions, ruts, and potholes.

Dust from on-site and other access roadways will not become a nuisance to surrounding areas. A water source and necessary equipment or other means of dust control approved by the TCEQ executive director will be provided.

21. **Noise Pollution and Visual Screening (§330.239)**

The transfer operation is confined in the building as much as possible. The Transfer Station has planted vegetation around the facility to assist in minimizing noise and to provide visual screening to minimize adverse visual impacts.
22. **Overloading and Breakdown (§330.241)**

In the event that the facility is inoperable for a period of 24 hours or more, the operator will make arrangements to have incoming solid waste redirected to another appropriate disposal or transfer facility.

Solid waste will not be allowed to accumulate in quantities that can not be handled in such a time to preclude the creation of odors, insect breeding, or harborage of vectors. If such an accumulation occurs, no additional solid waste will be received and arriving vehicles will be directed to other processing or disposal sites.

If the processing of solid waste is stopped for greater than 24 hours due to mechanical failures or other reasons, incoming solid waste will be diverted to other disposal or transfer facilities and arrangements made to remove any accumulated waste from the site.

Wastes will be stored on the transfer station floor for no longer than 72 hours prior to being loaded into trailers and transported off-site. Waste may be stored on-site in transfer trailers for up to 72 hours.

In the event of equipment repairs or during equipment maintenance periods, the facility may obtain equipment from other facilities, contractors, or local rental companies to avoid interruption of waste services, if possible.

23. **Sanitation (§330.243)**

All working surfaces that come in contact with waste will be washed at least weekly at the completion of the processing period (end of the work day). Water used to wash down the Transfer Station will be collected in drains and discharged directly to the sanitary sewer to prevent the creation of odors or an attraction to vectors. Surface drainage will be controlled through a combination of grading and piping systems to minimize surface water contact with waste or contaminated water. Any water that does come into contact with waste or contaminated water will be contained and disposed of in the sanitary sewer system.
Any ponded water at the facility will be controlled to avoid becoming a nuisance. In the event that objectionable odors do occur, appropriate measures will be taken to alleviate the condition.

24. **Ventilation, Odor and Air Pollution Control (§330.245)**

Air emissions from the facility will not cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act.

The facility and constructed air pollution abatement devices will obtain authorization, under 30 TAC Chapter 116 (relating to Control of Air Pollution By Permits for New Construction or Modifications) or Subchapter U of this chapter (relating to Standard Air Permits for Municipal Solid Waste Landfill Facilities and Transfer Stations), as applicable, from the Air Permits Division prior to the start of construction, except as authorized in Texas Health and Safety Code, §382.004, Construction While Permit Application Pending.

Operations will be confined within the building as much as possible. The facility will be operated to provide adequate ventilation for odor control and employee safety. If nuisance odors are found to be passing the permit boundary, the facility operator may suspend operations until the nuisance is abated or immediately take action to abate the nuisance.

Any air pollution, capture and abatement equipment utilized will be properly maintained and operated during the facility operation in order to adequately maintain its efficiency. The following measures will be employed to assist in air pollution control:

- Buffer zones onsite;
- Covering trucks;
- Operations primarily within a building;
- Special procedures for odorous loads;
- Cleaning facility at least weekly, and
- No overnight storage of waste except for extenuating emergency circumstances such as inclement weather or mechanical breakdown.
Reporting of emission events will be made in accordance with 30 TAC §101.210 and reporting of scheduled maintenance of air pollution control equipment will be made in accordance with 30 TAC §101.211.

An Odor Management Plan for the facility is included as Appendix III-D.

25. **Health and Safety (§330.247)**

Facility personnel will be trained in the facility’s health and safety plan, as revised periodically. Records of that training will be maintained in the facility operating records.

26. **Employee Sanitation Facilities (§330.249)**

Potable water and sanitary facilities will be provided for use by employees and visitors. These are located in the Maintenance Building, adjacent to the scale house. Potable water is also available at hydrants and hose connections located throughout the site. Portable sanitary facilities may also be utilized around the site, as needed.

27. **Disease Vector Control**

The operator will control vectors such as rodents, flies, and mosquitoes through proper daily facility operations. If necessary, a licensed professional will apply pesticides for control of vectors to ensure that proper chemicals are used and that they are properly applied.

28. **Salvaging and Scavenging**

For the purposes of this Plan, salvaging is considered to be the removal of materials from the floor of the Transfer Station as recycled materials. This is limited to NTMWD personnel or their contractor. Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. Salvaged materials will be removed from the site in a timely manner so as to prevent excessive accumulation of such material and to preclude the discharge of any pollutants from the area. Removal is anticipated to be monthly, but this may be extended or shortened depending on the amount of items received or recovered. Materials that will not be salvaged include all industrial or special wastes. Pesticide, fungicide, rodenticide, and
herbicide containers should not be salvaged unless being salvaged through a state-supported recycling program. The applicant does not plan to salvage these containers. Scavenging is the uncontrolled and unauthorized removal of materials and will not be allowed.

29. **Endangered Species Protection**

The Timber/Canebrake Rattlesnake is a State-listed threatened species. If any rattlesnake is identified on site during construction and/or operations, measures to avoid harm to the rattlesnake shall be taken. These measures may include ceasing work within the vicinity of the rattlesnake until the snake vacates the site of its own accord. In addition, the snake shall not be disturbed, harassed, pursued, captured, collected or otherwise injured in any way.
NORTH TEXAS MUNICIPAL WATER DISTRICT

LOOKOUT DRIVE TRANSFER STATION

RICHARDSON, TEXAS

COLLIN COUNTY

PART IV - B
Site Operating Plan for the Proposed Facility

PERMIT AMENDMENT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

PERMIT NO.: MSW 53A

OCTOBER 2012
REVISION 2

Applicant:
North Texas Municipal Water District
PO Box2408
Wylie, Texas 75098

Prepared by:
CP&Y Inc.
1820 Regal Row, Suite 200
Dallas, Texas 75235
Firm No: 1741
# TABLE OF CONTENTS

1. Introduction ............................................................................................................. 1
2. Training Requirements .......................................................................................... 1
3. Waste Acceptance and Analysis (§330.203) ...................................................... 2
4. Facility-Generated Wastes (§330.205) ................................................................. 8
5. Contaminated Water Management (§330.207) ...................................................... 9
6. Waste Storage Requirements (§330.209) ............................................................... 10
7. Approved Waste Containers (§330.211) ............................................................... 10
8. Citizen's Collection Stations (§330.213) ............................................................. 11
9. Requirements for Stationary Compactors (§330.215) .......................................... 11
10. Pre-Operation Notice (§330.217) ..................................................................... 11
11. Recordkeeping and Reporting Requirements (§330.219) .................................. 11
12. Fire Protection (§330.221) ................................................................................ 13
13. Unloading Control (§330.223) ......................................................................... 15
15. Facility Operating Hours (§330.229) ................................................................ 16
16. Facility Sign (§330.231) ................................................................................... 17
17. Control of Windblown Material and Litter (§330.233) ....................................... 18
18. Materials Along the Route to the Facility (§330.235) ........................................ 18
19. Facility Access Roads (§330.237) .................................................................... 18
20. Noise Pollution and Visual Screening (§330.239) ............................................. 19
21. Overloading and Breakdown (§330.241) ............................................................ 19
22. Sanitation (§330.243) ....................................................................................... 20
23. Ventilation, Odor and Air Pollution Control (§330.245) .................................. 20
24. Health and Safety (§330.247) ........................................................................... 21
25. Employee Sanitation Facilities (§330.249) ......................................................... 21
26. Disease Vector Control ..................................................................................... 21
27. Salvaging and Scavenging ................................................................................ 22
28. Endangered Species Protection ...................................................................... 22
TABLES

TABLE 1 – FACILITY INSPECTION AND MAINTENANCE LIST
TABLE 2 – OPERATING RECORD

ATTACHMENTS

ATTACHMENT IV-1 – LANDSCAPE PLAN
ATTACHMENT IV-2 – FIRE PROTECTION PLAN APPROVAL
1. **Introduction**

This portion (Part IV-B) of the site Operating Plan is applicable only to waste management operations in the Proposed Facility, during both Phases 1 and 2. At no time will waste management operations be conducted in both buildings concurrently. This Site Operating Plan (SOP) contains information about how the North Texas Municipal Water District (NTMWD) will conduct operations at the Lookout Drive Transfer Station facility, but is not intended to be a comprehensive operating manual. The SOP represents the general instruction for facility management and personnel to operate the facility in a manner consistent with the approved design and the Texas Commission on Environmental Quality (TCEQ) rules to protect human health and the environment and prevent nuisances.

The SOP is Part IV of the MSW permit/registration application and consists of the information required by Title 30, Texas Administrative Code (TAC), Chapter 330, Subchapter E: Operational Standards for Municipal Solid Waste Storage and Processing Units, 30 TAC §330.201–§330.249. At a minimum, the SOP includes provisions for facility management and operating personnel to meet the general and site-specific requirements of these rules.

Facility Name: Lookout Drive Transfer Station  
TCEQ MSW Permit/Registration Number: MSW 53A  
Facility Address: 1601 E. Lookout Drive  
Richardson, Texas 75082  
RN Number: RN 102778438  
CN Number: CN 601365448

2. **Training Requirements**

A copy of the personnel training records and MSW Operator Licenses will be maintained at the NTMWD Administrative office located at 505 E. Brown Street in Wylie Texas. As noted in Appendix I-B, Part I Form, Page 9, NTMWD maintains Class A licenses for the Transfer Station Supervisors. At least one NTMWD employee will possess a Class A or Class B Municipal Solid Waste operator license, as defined in 30
TAC Chapter 30. If a licensed operator is not on-site during all transfer station operating hours, a licensed operator will be available by telephone.

3. Waste Acceptance and Analysis (§330.203)

Authorized Wastes

The transfer station may receive residential, commercial, construction or demolition and Class 2 and Class 3 industrial non-hazardous municipal solid waste. No industrial hazardous wastes or Class 1 industrial waste will be accepted at the facility. No separate special wastes other than used oil will be accepted at the facility. Small quantities of special wastes may inadvertently be received if they are unidentified and included as part of the mixed municipal waste stream. These wastes, if identified, will be separated and will not be accepted.

Recyclables (white goods and tires) may also be accepted and temporarily stored on-site in the recyclable drop-off area, as shown on Attachment II-3-2. These materials will be placed in separate designated roll off containers with a maximum capacity of 40 cy each. When sufficient quantities are accumulated, the containers will be transported off-site to an authorized facility for recycling. The containers will be stored onsite for a maximum of 90 days. They will be removed as needed to prevent nuisance conditions. Tires accepted for recycling shall be managed in accordance with applicable requirements prescribed in 30 TAC Chapter 328, Subchapter F.

The Lookout Drive Transfer Station may receive waste from third party haulers and from any of the Solid Waste System Member Cities (Allen, Frisco, McKinney, Plano and Richardson) but the primary contributors of waste to this facility are the cities of Richardson and Plano. Based on the type of wastes currently received and expected to be received, there are no constituents or characteristics that would be a limiting parameter that would impact or influence the design and operation of the facility.

A maximum of 1,500 tons per day of municipal solid waste will be received at the site for subsequent transfer and disposal at an appropriate facility. Less than 5 percent, by weight, of this waste is composed of Class 2 or Class 3 industrial waste. The remainder is municipal solid waste. The maximum amount of waste to be stored at any point in
time is 900 tons. The maximum and average lengths of time that solid waste will remain at the facility are 3 days and 1 day or less, respectively. Solid waste will not be stored overnight at the facility except for extenuating emergency situations such as inclement weather or mechanical breakdown.

Waste received at the site is transferred to a Type I Municipal Solid Waste Landfill for disposal.

Used oil will be temporarily stored in a container until transported off-site by an authorized hauler to an approved oil recycling facility. The container’s size and material may vary if the container is replaced. The container shall be made of steel, HDPE, or other material compatible with the storage of used oil, be double walled or have sufficient secondary containment to contain the entire volume of the container, and have a maximum capacity of 1,000 gallons. The container will be located as shown on Attachment II-3-2. The container will be located in a corner or adjacent to a wall of the new transfer station building to protect it from facility operations. Additionally, floor paint, cones, barricades, or other traffic control devices will be used around the container to make it more visible to vehicles and heavy machinery. The used oil will be removed from the site at least quarterly. Contaminated Water will be sampled and handled in accordance with the Contaminated Water Plan, Section 4, in this Site Operating Plan.

Sludges are not accepted at the facility.

**Receipt of Large Items**

Items that can be classified as large, heavy or bulky can include white goods (household appliances), air conditioning units, metal tanks, large metal pieces, etc. These items may be accepted, however, they may also be segregated for recycling at the discretion of NTMWD. If segregated for recycling, these items will be placed in designated roll off container(s) with a maximum capacity of 40 cy each. The containers will be located in the recyclable drop off area as shown on Attachment II-3-2. When sufficient quantities are accumulated, the containers will be transported off-site to an authorized facility for recycling. They will be stored on site for a maximum of 90 days. They will be removed as needed to prevent nuisance conditions.
Prohibited Wastes

Wastes authorized above will not contain, nor will the transfer station accept, the following for disposal:

- Regulated Hazardous Waste other than from Conditionally Exempt Small Quantity Generators (CESQG). Municipal hazardous waste from a CESQG may be accepted provided the generator provides a certification that it generates no more than 220 pounds of hazardous waste per calendar month.
- Polychlorinated Biphenyl (PCB) wastes, as defined under 40 Code of Federal Regulations, Part 761.
- Used-oil filters from internal combustion engines (except for recycling).
- Whole used or scrap tires (except for recycling).
- Items containing chlorinated fluorocarbons (CFC's), such as refrigerators, freezers, and air conditioners, unless the generator or transporter provides written certification that the CFC's have been evacuated from the unit and that it was not knowingly allowed to escape into the atmosphere. These appliances may be accepted without certification at the discretion of NTMWD staff and stored until a certified operator can remove the CFC's and certify that they have been properly evacuated.
- Liquid waste which does not pass EPA Method 9095 Paint Filter Test shall not be accepted unless it is bulk or non-containerized liquid waste that is:
  - household waste other than septic waste; or
  - contained liquid waste and the container is a small container similar in size to that normally found in the household waste;
  - in a container designated to hold liquids for use other than storage.
- Regulated Asbestos Containing Materials.
Procedures for the Detection and Prevention of Hazardous and PCB Waste

Procedures for the detection and prevention of the disposal of the following: regulated hazardous waste as defined in 40 CFR Part 261; and polychlorinated biphenyl (PCB) wastes as defined in 40 CFR Part 761 are listed below.

Random visual inspections of incoming waste will be conducted. The following summarizes the inspection process.

A. Inspection Procedures

All site staff will be trained in the screening inspection process and will receive training on random inspection guidelines. All training will be documented and will become part of the operating record of the site.

Although the inspection location may vary, all inspections will either be made before unloading of waste or within the building.

Vehicle inspection is at the discretion of the inspector. However, vehicles that deliver commercial and Class 2 and Class 3 industrial waste will be prioritized for inspections. Such vehicles typically include front-end loaders, trucks with compactor boxes, side loaders, trucks with roll-off boxes, stake-bed trucks, dump trucks, pick-up trucks, and pick-up trucks with trailers transporting non-household wastes. However, any vehicle entering the facility may be inspected.

Vehicles containing suspicious loads will be inspected. Suspicious loads may include:

- Drums or containers with warning labels
- Loads which have a visible emission, smoke, strong chemical odor, or cause physical symptoms (e.g., irritation of eyes, nose, throat, skin, nausea, dizziness, or headache)

The inspector will not inspect any vehicle that appears to present possible physical danger. The Foreman or his designee shall be contacted immediately if such a load enters the facility.
The Foreman or his designee shall determine when to conduct inspections of incoming loads. Such inspections shall be conducted in a manner that allows the inspector to view all contents of the waste load. However, there may be some situations where it is not feasible to view the entire contents of the waste load (e.g. baled wastes). In these situations, the inspector shall make an effort to view as much as possible and note on the inspection form that all material was not visible and state the reason why. Such inspections shall be conducted in an expeditious manner to minimize disruption to normal operations.

B. Management of Regulated Wastes

If the waste is not readily identifiable, is hazardous, contains regulated levels of PCB's, or is deemed otherwise unacceptable by the inspector, the load will be rejected. The inspector will make an effort to determine whether the waste is acceptable for disposal by performing at least one of the following: 1) questioning the transporter about the origin of the waste; 2) contacting the generator; 3) reviewing paperwork; e.g. manifests, trip tickets, material safety data sheets (MSDS’s); or 4) using knowledge based on container packaging labels. If the load is acceptable, the inspector will then complete a Random Waste Screening Report, the driver will be allowed to proceed, and the waste moved to the tipping area.

Should an incident occur where regulated hazardous waste, PCBs, radioactive, or other prohibited wastes are suspected or discovered, the waste will not be accepted. Such material will be isolated until it can be identified to determine the proper disposition or handling procedures. During this identification process, the generator or generator representative will be contacted to determine the origin and identity of the material. If the material is determined to be a regulated hazardous waste or contains regulated levels of PCBs, radioactive or other prohibited material, the TCEQ Region 4 office will be verbally notified of the incident and the planned disposition of the material. Proper disposition of the prohibited waste will be specific to that waste and will be implemented upon TCEQ concurrence.
If the waste is regulated hazardous, contains PCBs above regulated levels, or is unacceptable for disposal as determined by the facility personnel, the load will be rejected. The Foreman or his designee will determine how to manage the unacceptable materials based on regulations, permit restrictions, and the District's policies and procedures for waste acceptance. Regulated hazardous wastes and regulated PCB wastes discovered during the inspection must be disposed of off-site at a permitted treatment, storage and disposal facility.

In rare cases where the transporter or generator cannot be identified and the facility has accepted a: 1) regulated hazardous; 2) regulated PCB-containing waste; or 3) unauthorized waste; the District or the facility operator will be responsible for meeting applicable federal, state, and local regulations in the removal and proper disposal of the waste.

C. Training

Employee training for random load inspections will be incorporated with other training programs (e.g., safety meetings).

D. Health and Safety

Safety precautions and personal protective equipment will be used by the inspector(s) during inspections in accordance with the NTMWD Health and Safety Plan. The facility operator will follow recommended site safety precautions to be taken during the inspection.

E. Record Keeping

All inspection records, training procedures, notification procedures and records relating to the hazardous and PCB waste detection and prevention program will be maintained in the facility's operating record.
F. Facility Inspection and Maintenance List

Table 1 – Facility Inspection and Maintenance List

<table>
<thead>
<tr>
<th>Item</th>
<th>Task</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fence/Gates</td>
<td>Inspect perimeter fence and gates for damage. Make repairs if necessary.</td>
<td>Weekly</td>
</tr>
<tr>
<td>Windblown Waste</td>
<td>Police working area, wind fences, access roads, entrance areas, and perimeter fence for loose trash. Clean up as necessary.</td>
<td>Daily as Specified in Section 18</td>
</tr>
<tr>
<td>Waste Spilled on Route to the Facility</td>
<td>Police the entrance areas and all roads at least 2 miles from facility entrances for loose trash. Clean up as necessary.</td>
<td>Daily as Specified in Section 19</td>
</tr>
<tr>
<td>Facility Access Road</td>
<td>Inspect facility access road for damage from vehicle traffic, erosion, or excessive mid accumulation. Maintain as needed with crushed rock or stone. Mud accumulated on roads will be removed or cleaned. Depressions, ruts and potholes will be graded as needed.</td>
<td>Daily - More often during wet weather or extended dry weather periods</td>
</tr>
<tr>
<td>Facility Signs</td>
<td>Inspect all facility signs for damage, general location, and accuracy of posted information.</td>
<td>Weekly</td>
</tr>
</tbody>
</table>

4. **Facility-Generated Wastes (§330.205)**

Wastes generated by the transfer station will be processed or disposed at an authorized solid waste management facility. The only solid wastes generated on site are typical office wastes. It is not anticipated that any solid wastes will be generated at the facility that cannot be properly handled at NTMWD's 121 Regional Disposal Facility (121 RDF).

Wastewater generated by the transfer station will be managed in accordance with §330.207, Contaminated Water Management. All building wash down water, truck washing water and contaminated surface water will be collected, passed through a
grease/sand trap, and discharged into the City of Richardson wastewater collection system for treatment.

No sludges are generated on site.

5. **Contaminated Water Management (§330.207)**

All liquids resulting from the operation of the transfer station, including tipping floor wash down water and water that has come in contact with waste, will be disposed of in a manner that will not cause surface water or groundwater pollution. Any water that contacts waste or is otherwise contaminated will be collected and disposed of into the City of Richardson sanitary sewer system. Contaminated water will be collected and properly managed. (See Section 3.2.5 – Effluent Discharge of Part III for a description of the collection system.

This facility does not process grease trap waste, or septage; and is not a mobile liquid waste processing unit.

Wastewater discharged to a treatment facility permitted under Texas Water Code, Chapter 26 will not:

1. interfere with or pass-through the treatment facility processes or operations;
2. interfere with or pass-through its sludge processes, use, or disposal; or
3. otherwise be inconsistent with the prohibited discharge standards, including 40 Code of Federal Regulations Part 403, General Pretreatment Regulations for Existing and New Source Pollution.

The daily effluent design standard for oil and grease concentration leaving the facility and entering a public sewer system will not exceed 200 milligrams per liter or the concentration established in the wastewater discharge permit pretreatment limit or the concentration established by the treatment facility permitted under Texas Water Code, Chapter 26, and the National Pollutant Discharge Elimination System. This meets the requirements of 30 TAC 330.207(g). In addition, the proposed facility will not require a wastewater permit as the quantity of water discharged to the sanitary sewer system is less than the amount that is required to have a permit.

All solid waste will be stored in such a manner that it does not constitute a fire, safety, or health hazard or provide food or harborage for animals and vectors, and shall be contained within the tipping area. The tipping area is sized to contain the solid wastes delivered and transferred daily. Materials received for recycling will be stored in an area separate from the transfer station building. These materials will be stored in the recyclables drop off area as noted on Attachment III-1, or other appropriate areas. However, the used oil recycling receptacle will be located appropriately inside the transfer station building. These material storage areas will be inspected weekly for ponding water and the harborage of vectors. Any ponded water will be promptly removed. Vectors will be discouraged by maintaining a clean and neat area, and by removal of items once sufficient quantities are accumulated to warrant off-site transport.

The transfer station is limited by the Application to receive a maximum of 1,500 tons per day (tpd) of waste. This throughput is not a limit of design. A maximum of approximately 900 tons of waste will be stored at the facility within the enclosed building. The maximum and average lengths of time that solid waste will remain at the facility are 3 days and 1 day or less, respectively. Solid waste will not be stored overnight at the facility except for extenuating emergency situations such as inclement weather or mechanical breakdown. Non-stored wastes will be transported daily to the NTMWD 121 RDF. In the event that the 121 RDF is not able to receive the waste for disposal, waste will be transported to another TCEQ approved disposal facility.

7. **Approved Waste Containers (§330.211)**

Solid waste that is received containing food wastes will be placed in the transfer building. The receiving area will be maintained in a clean condition so that it does not constitute a nuisance and retards the harborage, feeding, and propagation of vectors.

No food waste will be stored outside the building.

The transfer trailers are designed to prevent spillage or leakage during storage, handling or transport.
8. **Citizen’s Collection Stations (§330.213)**

Citizens may deposit wastes inside the transfer station only on the Tipping Area for loading into transfer vehicles. Once a citizen vehicle enters the building, staff or signs will guide them to an area to unload their waste. The materials segregated for recycling will be placed in the containers in the recyclables area. Rules will be posted inside and outside the transfer station building for the citizens governing the use of the facility including who may use it, and what wastes are acceptable or not acceptable at the facility.

There is not a citizen collection station proposed, therefore there are no separate container requirements.


There are no stationary compactors on-site.

10. **Pre-Operation Notice (§330.217)**

This is not a Type V mobile liquid processing unit or a Type VI demonstration project.

11. **Recordkeeping and Reporting Requirements (§330.219)**

A copy of the permit, the approved permit application and all other related or required plans or documents will be maintained at the NTMWD Administrative Offices located at 505 E. Brown Street in Wylie, and shall be considered a part of the site operating record of this facility. During construction, a copy of the approved Permit Application and any other required plan or other related document will be maintained at the Lookout Drive Transfer Station. The Site Operating Record for the Existing Transfer Station is not required to be maintained at the Lookout Drive Transfer Station but will be maintained at the NTMWD Administrative offices in Wylie, Texas. Upon completion of construction of the facility, a copy of the “as-built” construction plans and specifications will also be maintained at the Lookout Drive Transfer Station. In addition, information and data shall be recorded, as appropriate, in the operating record to be retained at the NTMWD Administrative Offices during the active life of the site and after certification of closure. Upon request by the Executive Director, all such documents will be furnished and made
available for inspection at all reasonable times. The information listed in Table 1 will be recorded and retained in the operating record for the life of the facility.

**Table 2 - Operating Record**

<table>
<thead>
<tr>
<th>Records To Be Maintained</th>
<th>Rule Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Location - Restriction demonstration</td>
<td>§330.219(b)(1)</td>
</tr>
<tr>
<td>2 Inspection records and training procedures</td>
<td>§330.219(b)(2)</td>
</tr>
<tr>
<td>3 Closure plan and any monitoring, testing or analytical data related to closure requirements.</td>
<td>§330.219(b)(3)</td>
</tr>
<tr>
<td>4 Cost estimates and financial assurance documents for closure</td>
<td>§330.219(b)(4)</td>
</tr>
<tr>
<td>5 Copies of all correspondence and responses relating to the operation of the facility, modifications to the permit/registration, approvals, and other matters pertaining to technical assistance</td>
<td>§330.219(b)(5)</td>
</tr>
<tr>
<td>6 All documents, manifests, shipping documents, trip tickets, etc., involving special waste</td>
<td>§330.219(b)(6)</td>
</tr>
<tr>
<td>7 Any other document(s) as specified by the approved permit/registration or by the executive director</td>
<td>§330.219(b)(7)</td>
</tr>
<tr>
<td>8 Access Control Inspection and Maintenance</td>
<td>§330.223</td>
</tr>
<tr>
<td>9 Daily Control of On-Site Windblown Material and Litter</td>
<td>§330.233</td>
</tr>
<tr>
<td>10 Policing Materials Along the Route to the Facility</td>
<td>§330.235</td>
</tr>
<tr>
<td>11 Dust Nuisance Control Efforts</td>
<td>§330.237(b)</td>
</tr>
<tr>
<td>12 Salvaged Material Storage Nuisance Control Efforts</td>
<td>§330.209(b)</td>
</tr>
<tr>
<td>13 Documents pertaining to the Odor Management Plan</td>
<td>§330.245</td>
</tr>
</tbody>
</table>

These records will be placed in the operating record within seven working days or upon receipt of analytical data as appropriate. An authorized representative will sign all reports and other information requested by the Executive Director in accordance with §330.219(c).
12. **Fire Protection (§330.221)**

Burning is not permitted at the site. Fire extinguishers will be kept on all equipment and in the building. The site currently receives potable water from the City of Richardson. There is an adequate supply of pressurized water to fight fires and the City of Richardson Fire Department is available to assist with fire fighting if needed. Fire hydrants will be provided in accordance with the approved City of Richardson Site Development Plan. All personnel will be annually trained in the contents and use of the following Fire Protection Plan. The training will include the use and operation of on-site firefighting equipment.

**Fire Protection Plan**

This Fire Protection Plan has been reviewed and approved by the City of Richardson Fire Department (see Attachment IV-2 – Fire Protection Plan Approval)

The following steps are taken regularly at the facility by designated personnel to prevent fires:

- Operators will be alert for signs of burning waste such as smoke, steam, or heat being released from incoming waste loads.
- Equipment used to move waste will be routinely cleaned through the use of water or steam cleaners. The water or steam cleaning will remove combustible waste and caked material which can cause equipment overheating and increase fire potential.
- Smoking is only permitted in designated areas away from the waste management areas.

**Source of Fire Prevention**

- All fire extinguishers will be fully charged and ready for use at all times. All fire extinguishers will be inspected periodically and recharged as needed,
- The City of Richardson Fire Department will be a source of fire protection.
- Fire hydrants will be provided (See Attachment II-3).
Fire Protection Use Procedures
- When using a fire extinguisher, stand up-wind from the fire, pull the pin, and aim the hose or nozzle toward the base of the fire.
- Call 911 to notify the City of Richardson Fire Department.

General Rules for Fire Fighting
- Alert other facility personnel.
- Contact the City of Richardson Fire Department.
- Assess extent of fire and possibility to spread and alternatives for extinguishing the fire.
- Do not attempt to fight a fire alone.
- Do not attempt to fight a fire without adequate personal protective equipment.
- Be familiar with the use and limitation of the firefighting equipment.
- If it appears that the fire can be safely fought with available fire fighting devices until the Fire Department arrives, attempt to contain or extinguish the fire.
- Upon arrival of the Fire Department personnel, direct them to the fire and provide assistance, if requested by Fire Department personnel.

Employee Fire Protection Training and Safety Procedures
- All facility personnel will be trained on fire extinguisher use and capabilities.
- All facility personnel will be trained on the general rules for fire fighting and the contents of this Fire Protection Plan. Fire Protection training will be provided to all on-site personnel on an annual basis and records of the training will be placed in the facility operating record.

Notice Requirements
In the event of a fire which cannot be extinguished within 10 minutes of discovery, the TCEQ shall be notified according to the following:
- Contact the TCEQ regional office by phone within 4 hours of discovery.
- Notify the TCEQ regional office in writing within 14 days of the fire.
13. **Access Control (§330.223)**

**Facility Security**

Access to the site will be controlled at the Scale House near the entrance and by perimeter site fencing to minimize unauthorized vehicular traffic, unauthorized and illegal dumping, and public exposure to hazards associated with waste management. An operator trained to operate the scales will be on-site during hours of waste acceptance. The entrance gate will be locked when the site is not in operation. Access to the remainder of the site will be restricted by a minimum six-foot high chain link fence.

**Vehicle Access**

Public access to the facility will be by way of E. Lookout Drive which is a 4 lane divided asphalt all-weather roadway. This roadway is designed with adequate turning radii to safely handle the vehicles expected at the facility. Only vehicles authorized by the facility Foreman, personnel vehicles, and authorized haul vehicles will have access beyond the facility entrance. Signage will provide direction to customers and the public at the entrance of the facility. Additional signage within the facility will provide direction to public unloading areas. Parking areas are provided on site for equipment, employees and visitors. The access roadway, interior roadways and unloading areas will be asphalt or concrete to minimize dust and mud.

Safety bumpers are not provided at hoppers for vehicles as they unload directly on the transfer station floor and not directly into the hopper.


Appropriate signs will be provided to indicate where vehicles are to unload. The unloading of solid waste will be confined to as small an area as practical and within the confines of the transfer station tipping area. To the extent possible, citizens will unload in an area separate from the collection vehicles, both areas contained within the building. A facility employee will direct each vehicle to the appropriate area for unloading and monitor all incoming loads of waste before they are loaded into the transfer trailers. The unloading of prohibited wastes will not be allowed. Monitoring of
incoming loads of waste will mitigate the potential for receipt of prohibited wastes. Any prohibited wastes will be returned promptly to the transporter or generator of the waste.

The unloading of waste in unauthorized areas is prohibited. Any waste deposited in an unauthorized area will be removed immediately and managed properly. Certain wastes are prohibited from management at the facility. Prohibited wastes are described in Section 3 of this plan. The unloading of prohibited wastes at the facility will not be allowed. Any prohibited waste not discovered until after unloading will be placed back in the offending transporter's vehicle, if possible, or otherwise returned promptly to the transporter or generator of the waste. In the event the unauthorized waste is not discovered until after the delivery vehicle is gone, the waste will be separated and controlled as necessary. The waste will be properly handled at an appropriate facility and a record of unauthorized material removal will be placed in the operating record.

15. **Spill Prevention and Control (§330.227)**

All waste will be handled inside the transfer station except for materials segregated for recycling. Wash water or leachate from waste in the building will be collected and discharged to the sanitary sewer system using drains inside the building. Any spills will be contained within the building, analyzed as appropriate, and properly handled.

16. **Facility Operating Hours (§330.229)**

The maximum facility waste acceptance hours will be Monday - Saturday 7:00 am - 7:00 pm. Site operations, such as cleaning the tipping floor, completion of truck loading and housekeeping may be performed outside of normal waste acceptance hours. The operation of heavy equipment at the site will be prohibited between the hours of 9:00 pm to 5:00 am unless specific authorization is provided. The information on hours and days of operation will be posted at the entrance to the facility.

In addition, upon authorization by the TCEQ, the transfer station may utilize alternative operating hours to accommodate special occasions, special purpose events, holidays, or other special occurrences up to 5 days per calendar year.
When warranted, the Solid Waste System Manager or his designee may request approval from the TCEQ regional office to allow additional temporary operating hours to address disaster or other emergency situations, or other unforeseen circumstances (such as traffic delays or adverse weather) that could result in the disruption of waste management services in the area. The Solid Waste System Manager or his designee will document the reason or reasons for the disruption for each day on which a disruption occurs and place the documentation in the operating record. In addition to the waste acceptance and operating hours, other non-waste management activities including administrative, maintenance, and repair activities may occur twenty-four hours per day, seven days per week.

17. **Facility Sign (§330.231)**

A conspicuous sign measuring a minimum four feet by four feet will be maintained at the entrance to the facility. The sign will state, in letters at least three inches high, the following information:

- Lookout Drive Transfer Station, Type V
- TCEQ Permit Number: MSW 53A
- Hours of Operation: Monday through Saturday 7:00AM to 7:00PM
- Emergency 24-hour Contact Number: (972) 442-5405
- Local Emergency Fire Department Number: 911

The sign will be visible and readable from the facility entrance. This sign or a second visible and readable sign will also state a list of all unauthorized or prohibited waste at the facility (hazardous, PCB, whole tires, CFC containing appliance, liquid wastes, regulated asbestos waste, etc.). Additional signs regarding site rules, such as speed limits and directions to the unloading areas will also be posted as appropriate.

Signs prohibiting smoking will be posted near the facility entrance or scale house. A sign will be prominently displayed at the facility entrance stating that all loads shall be enclosed, covered, or secured unless the load cannot blow or spill over the top of the load-carrying compartment.
18. **Control of Windblown Material and Litter (§330.233)**

Policing of litter and fugitive debris at the facility entrance area along Lookout Drive will be performed as part of a scheduled routine. Any litter scattered throughout the site, including along fences and access roads, and at the gate will be collected at least daily on the days the facility is in operation or more often as necessary to maintain aesthetic conditions and minimize vector attraction and fire hazards. All collected material will be returned to the transfer station. Should windblown debris become a problem, portable fences or other measures will be implemented to control fugitive debris. Windblown materials onsite should be minimized as all waste unloading and waste loading activities are handled within the transfer station building.

19. **Materials Along the Route to the Facility (§330.235)**

The District will use its own employees or contract labor for litter removal. Litter will be policed around the entire site perimeter and for a distance from the site entrance for 2.0 miles within the public right-of-way along Lookout Drive and Plano Road (SH 5) in either direction. Inspections of and collection of spilled material on major roadways will occur at least once per day when the facility is in operation. The City of Richardson has maintenance responsibility / authority over all of the roadways providing access to the facility. Therefore, there is no requirement to coordinate with TxDOT.

The District will take steps to encourage that vehicles hauling waste to the facility are enclosed or provided with a tarpaulin, net, or other means to effectively secure the load in order to prevent the escape of any part of the load by blowing or spilling. The operator will take actions such as posting signs, reporting offenders to proper law enforcement officers, adding surcharges, or similar measures.

20. **Facility Access Roads (§330.237)**

On-site roads for transfer and collection vehicles will be paved with concrete to provide all-weather access. The roads will be free draining. Site personnel will remove mud and trash from the paved on-site access roads as required to minimize the tracking of mud and trash onto public roadways. Access roadways will be maintained on a regular
basis, to minimize depressions, ruts, and potholes. Litter onsite will be picked up daily when the facility is in operation and the waste will be taken to the transfer station building.

Dust from on-site and other access roadways will not become a nuisance to surrounding areas. A water source and necessary equipment or other means of dust control approved by the TCEQ executive director will be provided.

21. **Noise Pollution and Visual Screening (§330.239)**

The nearest residence to the site is approximately 630 feet from the permit boundary. To minimize noise resulting from the operations of the transfer station, operations will primarily be conducted within the enclosed building. White noise back-up alarms will also be utilized by all on-site heavy equipment (i.e., front end loaders). In addition, landscaping in substantial compliance with the landscaping plan as approved by the City of Richardson will be planted during the first planting season following the beginning of Phase 2 to assist in minimizing the noise and to provide visual screening to minimize adverse visual impacts. A copy of the currently approved plan is included as Attachment IV-1.

22. **Overloading and Breakdown (§330.241)**

In the event that the facility is inoperable for a period of 24 hours or more, the operator will make arrangements to have incoming solid waste redirected to another appropriate disposal or transfer facility and arrangements made to remove any accumulated waste from the site.

Solid waste will not be allowed to accumulate in quantities that cannot be handled in such a time to preclude the creation of odors, insect breeding, or harborage of vectors. If such an accumulation occurs, no additional solid waste will be received and arriving vehicles will be directed to other processing or disposal sites.

The maximum daily receipt of waste at the transfer station (1,500 tpd) will not be exceeded during operation. Wastes will be stored at the facility for no longer than 3 days prior to being transported off-site.
In the event of equipment repairs or during equipment maintenance periods, the facility may obtain equipment from other facilities, contractors, or local rental companies to avoid interruption of waste services, if possible.

23. **Sanitation (§330.243)**

All building working surfaces that come in contact with waste will be washed at least twice weekly at the completion of the processing period (end of the work day). Water used to wash down the Transfer Station will be collected in drains and discharged through a grease and sand trap and then into the sanitary sewer to prevent the creation of odors or an attraction to vectors. Surface drainage will be controlled through a combination of grading and piping systems to minimize surface water contact with waste or contaminated water. Any water that comes in contact with waste or contaminated water will be collected and disposed of in the sanitary sewer system.

Any ponded water at the facility will be removed to avoid becoming a nuisance.

24. **Ventilation, Odor and Air Pollution Control (§330.245)**

Air emissions from the facility will not cause or contribute to a condition of air pollution as defined in the Texas Clean Air Act.

No liquid or solid wastes are stored outside of the building. The building provides the odor containment for solid wastes.

The facility and constructed air pollution abatement devices will obtain authorization, under 30 TAC Chapter 116 (relating to Control of Air Pollution By Permits for New Construction or Modifications) or Subchapter U of this chapter (relating to Standard Air Permits for Municipal Solid Waste Landfill Facilities and Transfer Stations), as applicable, from the Air Permits Division prior to the start of construction, except as authorized in Texas Health and Safety Code, §382.004, Construction While Permit Application Pending.

Routine tipping, sorting and transfer operations will be confined within the building as much as possible. The facility will be operated to provide adequate ventilation for odor control and employee safety.
Any air pollution, capture and abatement equipment utilized will be properly maintained and operated during the facility operation in order to adequately maintain its efficiency. The following measures will be employed to assist in air pollution/odor control:

1. Buffer zones on-site;
2. Covering trucks;
3. Operations within a building;
4. Special procedures for odorous loads;
5. Cleaning facility twice weekly, and
6. No overnight storage of waste except for extenuating emergency circumstances such as inclement weather or mechanical breakdown.

Reporting of emission events will be made in accordance with 30 TAC §101.210 and reporting of scheduled maintenance of air pollution control equipment will be made in accordance with 30 TAC §101.211.

An Odor Management Plan for the facility is included as Appendix III-D.

25. **Health and Safety (§330.247)**

Facility personnel will be trained in the facility’s health and safety plan, as revised periodically. Records of that training will be maintained in the facility operating records.

26. **Employee Sanitation Facilities (§330.249)**

Potable water and sanitary facilities will be provided for use by employees and visitors. These will be located convenient to the scale house. Potable water is also available at hydrants and hose connections located throughout the site. Portable sanitary facilities may also be utilized around the site, as needed.

27. **Disease Vector Control**

The operator will control vectors such as rodents, flies, and mosquitoes through proper daily facility operations. If necessary, a licensed professional will apply pesticides for control of vectors to ensure that proper chemicals are used and that they are properly applied.
28. **Salvaging and Scavenging**

For the purposes of this Plan, salvaging is considered to be the removal of materials from the floor of the Transfer Station as recycled materials. This is limited to NTMWD personnel or their contractor. Salvaging will not be allowed to interfere with prompt sanitary disposal of solid waste or to create public health nuisances. Salvaged materials will be removed from the site in a timely manner so as to prevent excessive accumulation of such material and to preclude the discharge of any pollutants from the area. Removal is anticipated to be monthly, but this may be modified depending on the amount of items received or recovered. Materials that will not be salvaged include all industrial or special wastes. Pesticide, fungicide, rodenticide, and herbicide containers should not be salvaged unless being salvaged through a state-supported recycling program. The applicant does not plan to salvage these containers. Scavenging is the uncontrolled and unauthorized removal of materials and will not be allowed.

29. **Endangered Species Protection**

The Timber/Canebrake Rattlesnake is a State-listed threatened species. If any rattlesnake is identified on site during construction and/or operations, measures to avoid harm to the rattlesnake shall be taken. These measures may include ceasing work within the vicinity of the rattlesnake until the snake vacates the site of its own accord. In addition, the snake shall not be disturbed, harassed, pursued, captured, collected or otherwise injured in any way.