TETRA TECH RIZZO

June 19, 2007

U.S. Environmental Protection Agency
RGP-NOI Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: Notice of Intent
NPDES Remediation General Permit
Construction Activities for Manufacturing Expansion
500 Soldiers Field Road
Allston, Massachusetts

Dear Sir or Madam:

On behalf of our client Genzyme Corporation (Genzyme), Tetra Tech Rizzo, Inc. (Tetra Tech) is submitting this Notice of Intent (NOI) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), Massachusetts General Permit (MAG910000). This NOI was prepared in accordance with the requirements of the NPDES RGP (Federal Register, Volume 70, No. 174) and related guidance documentation provided by the U.S. Environmental Protection Agency (EPA).

Site Information

This NOI has been prepared to facilitate the management of construction-related dewatering operations (Standard Industrial Code (SIC) 1541 for General Construction) that will be undertaken at the Genzyme facility located at 500 Soldiers Field Road in Allston, Massachusetts (the Site). The Site location is shown on a United States Geological Survey (USGS) Site Location Map included as Figure 1. Construction activities will be undertaken at the Site during re-development. The initial phase of the project includes the construction of an approximate 115,000 square-foot building addition, utility installation, at-grade parking and landscaping within the portion of the Site designated as "Phase II". Additional construction phases will be implemented and may include additional utility installations, parking facilities and landscaping within the portion of the Site designated as "Phase III". The attached construction plans show the existing conditions at the Site and the proposed construction phase work areas.

One Grant Street
Framingham, MA 01701
Tel 508.903.2000 Fax 508.903.2001

The Site is identified as a "disposal site" as defined by Massachusetts General Law (MGL) 21E and the 310 Code of Massachusetts Regulations (CMR) 40.0000, the Massachusetts Contingency Plan (MCP) since detectable concentrations of oil and hazardous materials (including: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), petroleum hydrocarbons, phenol and metals) have been identified at the Site. These conditions have been reported to the Massachusetts Department of Environmental Protection (DEP) previously and have since achieved regulatory closure for some areas of the Site. The Release Tracking Number (RTN) 3-3917 was assigned to the Site for past conditions that were evaluated. Remedial activities that are to be undertaken at the Site will be conducted under the new RTN expected to be assigned by DEP in the near future. Remedial work conducted at the Site is to be conducted under the applicable provisions of the MCP as a Release Abatement Measure (RAM). Since the Site is subject to the MCP, a State Application Form (BRPWM 12, Request for General permit coverage for the RGP) is not required and the discharge is exempt from the state fee. The DEP will be provided notice of coverage under the RGP in the applicable requisite filings submitted under the MCP and are being copied on correspondence related to this NPDES RGP.

Discharge Information

This NPDES RGP will cover discharges from temporary construction dewatering activities that are expected to be conducted between July 3, 2007 and September 30, 2009. These discharges will include recovered water that may accumulate at the base of excavated areas at the Site. Recovered water will be collected via a dewatering system that may include well points, sumps or trenches with wrapped collections structures that minimize the amount of solids (sediment) that are pumped with the water removed from the excavation(s). These discharges are expected to be intermittent, with maximum flows during initial dewatering of the standing water and diminishing flows to maintain the dewatered state during construction. It is expected that construction dewatering will be conducted at spot locations throughout the Site including utility installation areas. In addition, more extensive dewatering system(s) will be maintained within the footprint of excavations for building foundations where well points or sumps will collect water that accumulates in the excavation for removal. To the extent feasible, all disturbed contaminated soil areas will be maintained with negative drainage such that stormwater flows are directed toward the temporary construction dewatering system. Water recovered during temporary construction dewatering activities will be pumped for subsequent treatment as described below.

The treated water will be discharged via a gravity discharge line to one or more of the stormwater drop inlets at the Site with subsequent discharge to the Charles River. The

storwater drainage system at the Site is owned by Harvard University and is not subject to any local requirements under the EPA Phase I and II Municipal Separate Storm Sewer System (MS4) general permits. The location of the discharge to the Charles River is shown on the attached figure.

Contaminant Information

A total of four water samples were collected from the Site to represent the proposed influent stream to the dewatering and treatment system. Each of the samples collected at the Site were collected from groundwater monitoring and/or observations wells installed at the Site. The water samples were collected and submitted for analysis at a Massachusetts certified laboratory for the analytical parameters required under the NPDES RGP. The samples collected from the Site are considered to represent the influent waters that are anticipated during dewatering using wrapped collection features (well points or sumps). Some dewatering may occur at the Site from open excavation areas where stormwater or other water may accumulate within contaminated soils areas. For dewatering operations from contaminated soil areas, additional contaminants that were detected in Site soils, but have not been detected in the water collected from wells at the Site, may become mobilized into the influent water.

One water sample was collected from a location (HA-211-OW) that represents the influent from well points/sumps that will be installed to dewater the footprint of the proposed building foundation excavation. The majority of the water discharged under this NPDES RGP will originate from the well points/sumps within the building foundation excavation. The laboratory analysis detected the following compounds in water near the proposed building excavation:

- Acenaphthene (1.2 µg/l); and
- Total Iron (2,000 µg/l)

Three additional water samples were collected from locations (MW-1, MW-2 and MW-3) at the Site that represent spot dewatering locations associated with the construction of utilities, parking facilities or other landscape areas. These samples were collected to analyze target contaminants detected in soils at the Site and were not submitted for the full list of parameters identified under the RGP. The laboratory analysis of water from locations beyond the building footprint detected the following compounds:

- Naphthalene (1.9 µg/l); and
- Barium (139 to 500 µg/l)

Some compounds that were detected in Site soils were not detected in the aqueous phase samples representing the influent to the dewatering system at the Site. During excavation within contaminated soil areas at the Site, negative drainage will be maintained such that erosion or runoff from contaminated soil areas does not impact downgradient areas at the Site. During these excavations, it may become necessary to dewater soil excavation areas where water has accumulated (groundwater and/or stormwater runoff). As a result, the following contaminants identified in Site soils may become mobilized into the accumulated water within excavations in contaminated soil areas and require treatment prior to discharge:

- Polynuclear Aromatic Hydrocarbons;
- Total Petroleum Hydrocarbons;
- Phenol;
- Arsenic;
- Cadmium;
- Chromium; and
- Lead

The reporting limits achieved by the laboratory for select compounds exceed the Minimum Levels (MLs) for all test methods approved under the NPDES RGP. For the compounds where the laboratory reporting limit exceeded the NPDES effluent limitation values (listed in Appendix III of the RGP) in each of the samples collected, it is conservatively assumed that these compounds could be present in the discharge. These compounds include the following:

- Total Residual Chlorine (<200 µg/l);
- 1,1-dichloroethene (<5 µg/l);
- Dichloromethane (<5 µg/l);
- Benzo(a)anthracene (<0.1 µg/l);
- Copper (<25 µg/l);
- Nickel (<40 µg/l); and

- Zinc (<200 µg/l);

For compounds where the laboratory reporting limits exceeded the RGP MLs but were below the NPDES effluent limitations, it is unlikely that these compounds are present in the discharge. Compliance with the discharge limits listed in the RGP is based on analysis of samples using the approved test methods and applicable minimum levels. Since the laboratory reporting limits exceeded the method MLs in some instances, these values cannot be reported as zero and therefore the concentration was reported as less than (<) the laboratory reporting limit and the daily mass was not calculated (NC). A summary of the compounds detected at the Site is provided in the attached NPDES RGP NOI form.

Treatment System Information

The water removed by the construction dewatering process will undergo treatment using readily available technologies that may include sedimentation (settling), filtration (sand and/or bag filters) and adsorption (granular activated carbon) in order to achieve effluent concentrations in compliance with the NPDES discharge limitations prior to discharge to the Charles River. It is estimated that the dewatering of spot utility and related excavations necessary to facilitate construction may require dewatering at flow rates of up to 200 gallons per minute (gpm) during an eight-hour work shift. In addition, initial dewatering of the proposed building footprint excavation may require pumping at flows of up to 200 gpm on a constant basis to dewater the excavation within the foundation walls. Following initial dewatering, required dewatering flow rates are expected to diminish to a constant flow of 10 to 100 gpm. The various inflows are expected to result in an average discharge flow rate to the Charles River from the facility of 50 gpm or 0.11 cubic feet per second (ft^3/s) and a maximum flow rate of 200 gpm (0.45 ft^3/s). This equates to an average total daily flow of 0.072 million gallons per day (MGD) and a maximum daily flow of 0.29 MGD. For discharges that may occur over longer periods of time (such as dewatering the excavated base of a building foundation over a period of weeks to months), a continual discharge over a 24-hour period may be required. A flow rate from the facility during periods of continual discharge would likely range from approximately 10 to 100 gpm.

Based on the laboratory analytical results of water samples collected at the Site, the primary potential contaminants in the effluent are: acenaphthene, naphthalene and metals. In addition, polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), phenol, and metals have been detected at elevated concentrations in Site soils. It is likely that these contaminants could be present in the influent water due to solids or turbidity in the influent stream during dewatering of excavations within contaminated

areas at the Site. Unless subsequent sampling identifies concentrations of other dissolved phase contaminants attributable to the Site, water treatment will focus on solids removal prior to discharge. Initially the proposed treatment train will consist of one or more fractionation (frac) tank(s) to allow adequate retention time for solids to settle and separate. If the residence time within one frac tank is not sufficient to allow for adequate settlement and separation of solids, additional frac tanks may be added in series. If frac tanks are added in series, the effluent from the upstream frac tanks will be discharged (gravity or pumping) from the upper portions (approximately the upper 1/3) of the tank for discharge to the downstream frac tank. Following settling, the recovered water will be pumped from the upper portion of the final downstream frac tank to additional filtration units (sand filters, bag filters and/or cartridge filters). The primary filtration units will be installed as a duplex system connected in parallel to allow for the replacement of spent filtration media or back-flushing (for sand filters) without disrupting the discharge. A contingency is included for the addition of additional filter units as necessary to accommodate flow rates of up to 200 gpm.

Should dissolved phase Site contaminants (VOCs, SVOCs, TPH, etc.) be detected in the influent water stream, additional treatment elements may be required. Due to detected concentrations of VOCs, SVOCs, TPH and metals in soils at the Site, this NOI includes measures for the treatment of these compounds using available technologies (adsorption). If necessary, following solids removal the water may be pumped through granular activated carbon (GAC) and/or organophilic clay (OC) adsorption units that are connected in series. Each adsorption unit will include a total mass of adsorbent appropriate to achieve removal of the target contaminant(s) at a given flow rate. It is anticipated that, if necessary to remove dissolved phase organic contaminants, two GAC units each containing 2,000-pounds of GAC would be sufficient to treat the flows proposed for this discharge.

The treatment system will have sample ports to collect water samples from the system influent, system midpoint and system effluent. A schematic of the proposed treatment system train (Figure 3) has been attached to this NOI letter.

Receiving Surface Water Information

Effluent from the remedial system discharge will be directed to the Charles River through underground storm drainage piping owned and maintained by Harvard University. The storm drainage system discharges to the Charles River near Soldier Field Road in Allston, Massachusetts. At the location of the discharge, the Charles River is classified as a Class B surface water. The estimated seven-day ten-year low flow (7Q10) of the Charles River at the location of the discharge was evaluated using the USGS on-line StreamStats stream

flow assessment application. The value for the 7Q10 estimated using StreamStats is 23.7 ft^3/s. A copy of the report generated by StreamStats is appended to this submittal.

Information regarding a Total Maximum Daily Load (TMDL) for the Charles River was evaluated by a review of the listing for the Charles River (Cycle 2002, State List ID MA72-08-2002) as published on the on-line EPA database which was conducted on June 11, 2007. The segment of the Charles River that will be the subject of this discharge is located from the Watertown Dam to the Science Museum in Boston (from mile 9.8 to 1.2). This segment has State-listed impairments including: metals; noxious aquatic plants; nutrients; oil and grease; organic enrichment/low dissolved oxygen; pathogens; priority organics; taste, odor and color; turbidity; and total toxicity. There are no listed potential sources for these impairments. There are no TMDLs reported to EPA by the state. A copy of the listing printed from the EPA on-line database is appended to this submittal.

Consultation with State/Federal Services

The listed Areas of Critical Environmental Concern in Massachusetts and the Endangered Species list provided as Appendix I and Appendix II to the NPDES RGP were reviewed to determine whether listed endangered or threatened species or critical habitats are present at the Site or in the vicinity of the discharge. The results of this review indicate that there are no listed Endangered or Threatened Species or Critical Habitat in Suffolk County or near the Site or in the vicinity of the discharge. Pursuant to Appendix VII of the NPDES RGP, this facility meets the permit eligibility criteria (Eligibility Criteria A) for coverage under the NPDES RGP, and consultation with federal and/or state officials is not necessary at this time.

The listed National Historic Places in proximity to the discharge were reviewed using the on-line data base provided by the U.S. National Park Service (NPS). The Charles River Reservation Parkway is listed as a historic place and is located along the banks of the Charles River. The construction activities, operation and maintenance of the temporary construction dewatering treatment system at the Site that are the subject of this NPDES RGP are not expected to adversely impact locations of historic significance. The Charles River Reservation Parkway is located along the banks of the Charles River and is not located in the path of the discharge or in an area that will be impacted by construction. The discharge of treated water to the Charles River will be directed through the existing subsurface storm drainage system and will not cause damage, deterioration, alteration or destruction of the Charles River Reservation Parkway or impair its historic value in any way. Pursuant to Appendix VII of the NPDES RGP, this facility meets the permit

eligibility criteria for coverage under the NPDES RGP and consultation with federal and/or state officials is not necessary at this time.

Supplemental Site Information

A Notice of Intent for coverage under the NPDES Construction General Permit for Storm Water Discharges from Construction Sites (CGP) (MAR100000) was filed with EPA for the Site due to disturbance of soils over one acre during construction. A Storm Water Pollution Prevention Plan (SWPPP) was prepared for the work and includes measures for the control of storm water runoff and for minimizing impacts resulting from construction activities at the Site. The NPDES CGP will be applicable to discharges of stormwater from the Site from non-contaminated areas; areas that have been restored and/or stabilized; or areas where disturbances to the subsurface contaminated soils have not occurred. The control of erosion and stormwater runoff from contaminated soil areas at the Site will be conducted in accordance with the MCP and under the RAM for the proposed cleanup work.

Since the proposed discharge may be conducted for greater than 180 days (July 3, 2007 through September 30, 2009), a written Best Management Practices Plan (BMPP) has been prepared for the discharge operations covered under this permit. The BMPP will be kept on-site and available for review upon request.

Request for Coverage under the NPDES RGP

In consideration of the particulars of this discharge and the requirements of the NPDES RGP, it is our opinion that the subject discharge is eligible for coverage under the NPDES RGP. On behalf of our client Genzyme, Tetra Tech hereby requests coverage under the NPDES RGP for the discharge of recovered water during construction dewatering activities within contaminated areas to the surface waters of the Charles River. The attached NOI form provides the requisite information pertaining to this NOI and the appropriate signature of the facility Operator (Turner Construction Company) of the construction facility. Applicable treatment of the recovered water, compliance sampling, reporting and required submittals to EPA will be conducted by the facility Operator. Discharge of treated water is scheduled for July 3, 2007 through September 30, 2009 and will commence upon authorization by EPA.

TETRA TECH RIZZO

Questions or correspondence regarding the NPDES RGP should be directed through Mr. Dave Page, Project Manager for Turner Construction Company, the Operator of the facility who may be contacted at (617) 247-5527. Please contact the undersigned at (508) 903-2000 if you have any questions regarding this NOI.

Very truly yours,

Ian S. Cannan
Project Scientist

Ronald E. Myrick, Jr., P.E., L.S.P.
Project Manager

P:\12701000\12701064\NPDES RGP\2007-06-13(NOI_NPDES RGP).DOC

B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of **facility/site**: Construction Dewatering - Manufacturing Expansion		**Facility/site** address: ADJACENT PROPERTY TO 500 SOLDIERS FIELD ROAD, ALLSTON, MA (GENZYME BUILDING EXPANSION)		
Location of **facility/site**: longitude: 71°07'04" latitude: 42°21'45"	Facility SIC code(s): 1541	Street: off 500 Soldiers Field Road (Phase II and III areas)		
b) Name of **facility/site owner:** Genzyme Corporation		Town: Allston		
Email address of owner: JOHN.NADEAU@GENZYME.COM		State: MA	Zip: 02134	County: Suffolk
Telephone no.of facility/site **owner**: (617) 562-4583				
Fax no. of facility/site **owner**: (617) 562-4599		**Owner** is (check one): 1. Federal____ 2. State/Tribal____ 3. Private ✓ 4. other, if so, describe:		
Address of **owner** (if different from site):				
Street: 500 Soldiers Field Road				
Town: Allston	State: MA	Zip: 02134	County: Suffolk	
c) Legal name of **operator**: Turner Construction Company		**Operator** telephone no: (617) 247-5527		
		Operator fax no.: X 617-247-5436	**Operator** email: X dpage@TCCO.com	
Operator contact name and title: X Dave Page, Project Manager		David J Page		

Address of **operator** (if different from owner):	Street: 2 Seaport Lane #2		
Town: Boston	State: MA	Zip: 02210	County: Suffolk

d) Check "yes" or "no" for the following:
1. Has a prior NPDES permit exclusion been granted for the discharge? Yes___ No✓, if "yes," number:
2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes___ No✓, if "yes," date and tracking #:
3. Is the discharge a "new discharge"as defined by 40 CFR 122.2? Yes ✓ No___
4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes✓ No__

e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes✓ No___
If "yes," please list:
1. site identification # assigned by the state of NH or MA: 3-26896
2. permit or license # assigned: no Tier Classification Permit assigned
3. state agency contact information: name, location, and telephone number:
Massachusetts Department of Environmental Protection (978) 694-3200

f) Is the site/facility covered by any other EPA permit, including:
1. multi-sector storm water general permit? Y___ N✓*, if Y, number:
2. phase I or II construction storm water general permit? Y✓ N___,
if Y, number: MAR100000
3. individual NPDES permit? Y___ N✓, if Y, number:
4. any other water quality related permit? Y___ N✓*, if Y, number:
* PERMITS ASSOCIATED WITH ADJACENT BUILDING OPERATIONS EXCLUDED

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

a) Describe the discharge activities for which the owner/applicant is seeking coverage:
Discharge of treated water that is recovered during construction dewatering activities

b) Provide the following information about each discharge:	1) Number of discharge points: 1	2) What is the **maximum** and **average flow rate** of discharge (in cubic feet per second, ft^3/s)? Max. flow 0.45 Average flow 0.11 Is maximum flow a **design value**? Y___ N ✓ For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.

3) Latitude and longitude of each discharge within 100 feet: pt.1:long.71°01'03" lat.42°21'29"; pt.2: long._____ lat._____; pt.3: long._____ lat._____;
pt.4:long._____ lat._____; pt.5: long._____ lat._____; pt.6:long._____ lat._____; pt.7: long._____ lat._____; pt.8:long._____ lat._____; etc.

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent ✓ or seasonal _____? Is discharge ongoing Yes ____ No ✓ ?
c) Expected dates of discharge (mm/dd/yy): start 07/03/07 end 09/30/09	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites ✓	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites ✓	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		✓	1	grab	2540D	5000	<1E4	NC	<1E4	NC
2. Total Residual Chlorine			1	grab	4500	20	<200	NC	<200	NC
3. Total Petroleum Hydrocarbons	✓		3	grab	1664	1000	0	0	0	0
4. Cyanide	✓		1	grab	335.3	10	0	0	0	0
5. Benzene	✓		4	grab	*	2	0	0	0	0
6. Toluene	✓		4	grab	*	2	0	0	0	0
7. Ethylbenzene	✓		4	grab	*	2	0	0	0	0
8. (m,p,o) Xylenes	✓		4	grab	*	2	0	0	0	0
9. Total BTEX[4]	✓		4	grab	*	2	0	0	0	0

[4] BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)	✓		1	grab	504.1	0.01	<0.02	NC	<0.02	NC
11. Methyl-tert-Butyl Ether (MtBE)	✓		4	grab	*	5	0	0	0	0
12. tert-Butyl Alcohol (TBA)	✓		3	grab	8260B	0.5	<10	NC	<10	NC
13. tert-Amyl Methyl Ether (TAME)	✓		3	grab	8260B	0.5	<1	NC	<1	NC
14. Naphthalene		✓	4	grab	8270C	0.2	1.9	3.3E-4	0.55	1.5E-4
15. Carbon Tetra-chloride	✓		4	grab	*	2	<5	NC	0	0
16. 1,4 Dichlorobenzene	✓		4	grab	*	2	<5	NC	0	0
17. 1,2 Dichlorobenzene	✓		4	grab	*	2	<5	NC	0	0
18. 1,3 Dichlorobenzene	✓		4	grab	*	2	<5	NC	0	0
19. 1,1 Dichloroethane	✓		4	grab	*	1	<5	NC	0	0
20. 1,2 Dichloroethane	✓		4	grab	*	2	<5	NC	0	0
21. 1,1 Dichloroethylene			4	grab	*	2	<5	NC	0	0
22. cis-1,2 Dichloro-ethylene	✓		4	grab	*	2	<5	NC	0	0
23. Dichloromethane (Methylene Chloride)			4	grab	*	2	<10	NC	<5	NC
24. Tetrachloroethylene	✓		4	grab	*	2	<5	NC	0	0

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		4	grab	*	2	<5	NC	0	0
26. 1,1,2 Trichloroethane	✓		4	grab	*	2	<5	NC	0	0
27. Trichloroethylene	✓		4	grab	*	2	<5	NC	0	0
28. Vinyl Chloride	✓		4	grab	*	2	<5	NC	0	0
29. Acetone	✓		4	grab	*	50	0	0	0	0
30. 1,4 Dioxane	✓		3	grab	8260B	50	0	0	0	0
31. Total Phenols	✓		4	grab	8270C	1	<5.68	NC	<5	NC
32. Pentachlorophenol	✓		4	grab	8270C	1	0	0	0	0
33. Total Phthalates [5] (Phthalate esthers)	✓		4	grab	8270C	5	0	0	0	0
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		4	grab	8270C	5	0	0	0	0
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)		✓	4	grab	8270C					
a. Benzo(a) Anthracene			4	grab	8270C	0.05	<5.68	NC	<0.1	NC
b. Benzo(a) Pyrene	✓		4	grab	8270C	2	0	0	0	0
c. Benzo(b)Fluoranthene	✓		4	grab	8270C	0.1	0	0	0	0
d. Benzo(k) Fluoranthene	✓		4	grab	8270C	2	0	0	0	0
e. Chrysene	✓		4	grab	8270C	5	0	0	0	0

[5] The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		4	grab	8270C	0.1	0	0	0	0
g. Indeno(1,2,3-cd) Pyrene	✓		4	grab	8270C	0.15	0	0	0	0
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)		✓	4	grab	8270C		1.2	0.001	1.2	3.3E-4
h. Acenaphthene		✓	4	grab	8270C	0.5	1.2	0.001	1.2	3.3E-4
i. Acenaphthylene	✓		4	grab	8270C	0.2	<0.5	NC	<0.5	NC
j. Anthracene	✓		4	grab	8270C	2	0	0	0	0
k. Benzo(ghi) Perylene	✓		4	grab	8270C	0.1	0	0	0	0
l. Fluoranthene	✓		4	grab	8270C	0.5	0	0	0	0
m. Fluorene	✓		4	grab	8270C	0.1	<0.5	NC	<0.5	NC
n. Naphthalene-	✓		4	grab	8270C	0.2	<0.5	NC	<0.5	NC
o. Phenanthrene	✓		4	grab	8270C	0.05	<0.5	NC	<0.5	NC
p. Pyrene	✓		4	grab	8270C	0.05	<0.5	NC	<0.5	NC
37. Total Polychlorinated Biphenyls (PCBs)	✓		4	grab	608	0.5	0	0	0	0
38. Antimony	✓		1	grab	6010B	60	0	0	0	0
39. Arsenic	✓		1	grab	6020A	5	0	0	0	0
40. Cadmium	✓		1	grab	6010B	5	0	0	0	0
41. Chromium III	✓		1	grab	6010B	10	0	0	0	0
42. Chromium VI	✓		1	grab	7196A	10	0	0	0	0

PARAMETER	Believe Absent	Believe Present	# of Samples (1 min-imum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper			1	grab	6010B	5	<25	NC	<25	NC
44. Lead	✓		1	grab	6020A	3	0	0	0	0
45. Mercury	✓		1	grab	7470A	0.2	0	0	0	0
46. Nickel			1	grab	6010B	10	<40	NC	<40	NC
47. Selenium	✓		1	grab	6020A	50	0	0	0	0
48. Silver	✓		1	grab	6010B	10	0	0	0	0
49. Zinc			1	grab	6010B	10	<200	NC	<200	NC
50. Iron		✓	1	grab	6010B	100	2000	2.2	2000	0.5
Other (describe):		✓	3	grab	6010B	NA	500	0.5	139	0.07

c) For discharges where **metals** are believed present, please fill out the following:

Step 1: Do any of the metals in the influent have a **reasonable potential** to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y ✓ N ____	If yes, which metals? Iron
Step 2: For any metals which have **reasonable potential** to exceed the **Appendix III** limits, calculate the **dilution factor (DF)** using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: Iron DF: 53.7	Look up the limit calculated at the corresponding dilution factor in **Appendix IV.** Do any of the metals in the **influent** have the potential to exceed the corresponding **effluent** limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y ____ N ✓ If "Yes," list which metals:

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:
see attached letter and treatment system schematic (Figure 3)

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ✓	Air stripper	Oil/water separator	Equalization tanks ✓	Bag filter ✓	GAC filter ✓
	Chlorination	Dechlorination	Other (please describe): GAC filter and organophilic clay filters are optional depending on influent compounds			

c) Proposed **average** and **maximum flow rates** (gallons per minute) for the discharge and the **design flow rate**(s) (gallons per minute) of the treatment system:
Average flow rate of discharge 50 Maximum flow rate of treatment system 200 Design flow rate of treatment system 200

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):
none

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct____	Within facility__	Storm drain ✓	River/brook____	Wetlands_____	Other (describe):

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:
storm drainage system to Charles River, see attached letter for detailed narrative

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:
1. For multiple discharges, number the discharges sequentially.
2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water
The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water B ,

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water 23.7 cfs
Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes ✓ No___ If yes, for which pollutant(s)?
metals, noxious plants, nutrients, oil and grease, organic enrichment/low DO, pathogens, priority organics, taste, odor, color, turbidity, total toxicity

Is there a TMDL? Yes___ No ✓ If yes, for which pollutant(s)?

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes___ No ✓
Has any consultation with the federal services been completed ? No ✓ or is consultation underway? Yes No___
What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (~~check~~ one):
a "no jeopardy" opinion? ___ or written concurrence___ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?
Yes___ No ✓ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes___ No ✓

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

see attached documentation

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

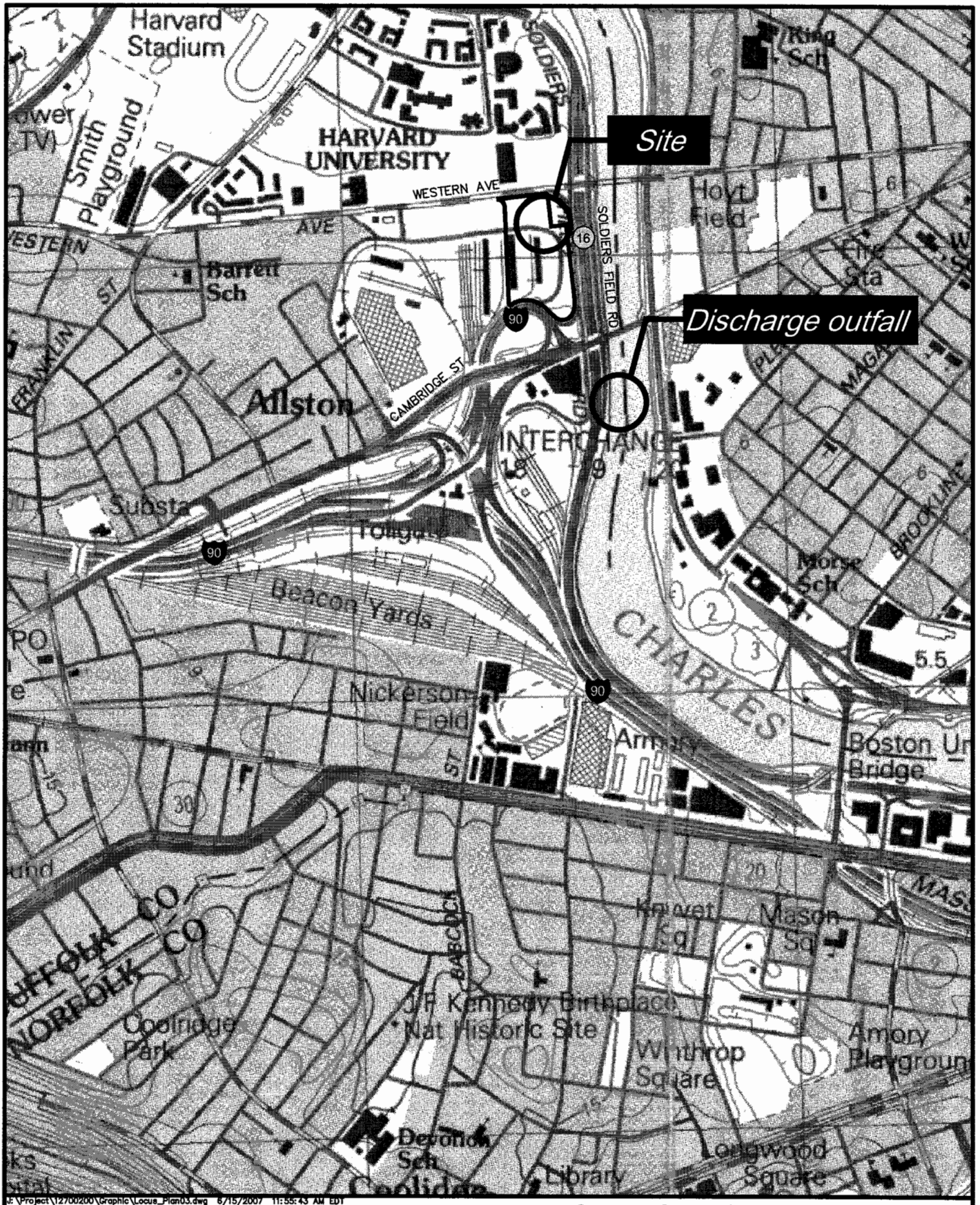
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

Facility/Site Name: Construction Dewatering Manufacturing Expansion

Operator signature: X David J Page

Title: X Project Executive

Date: X 6/25/07



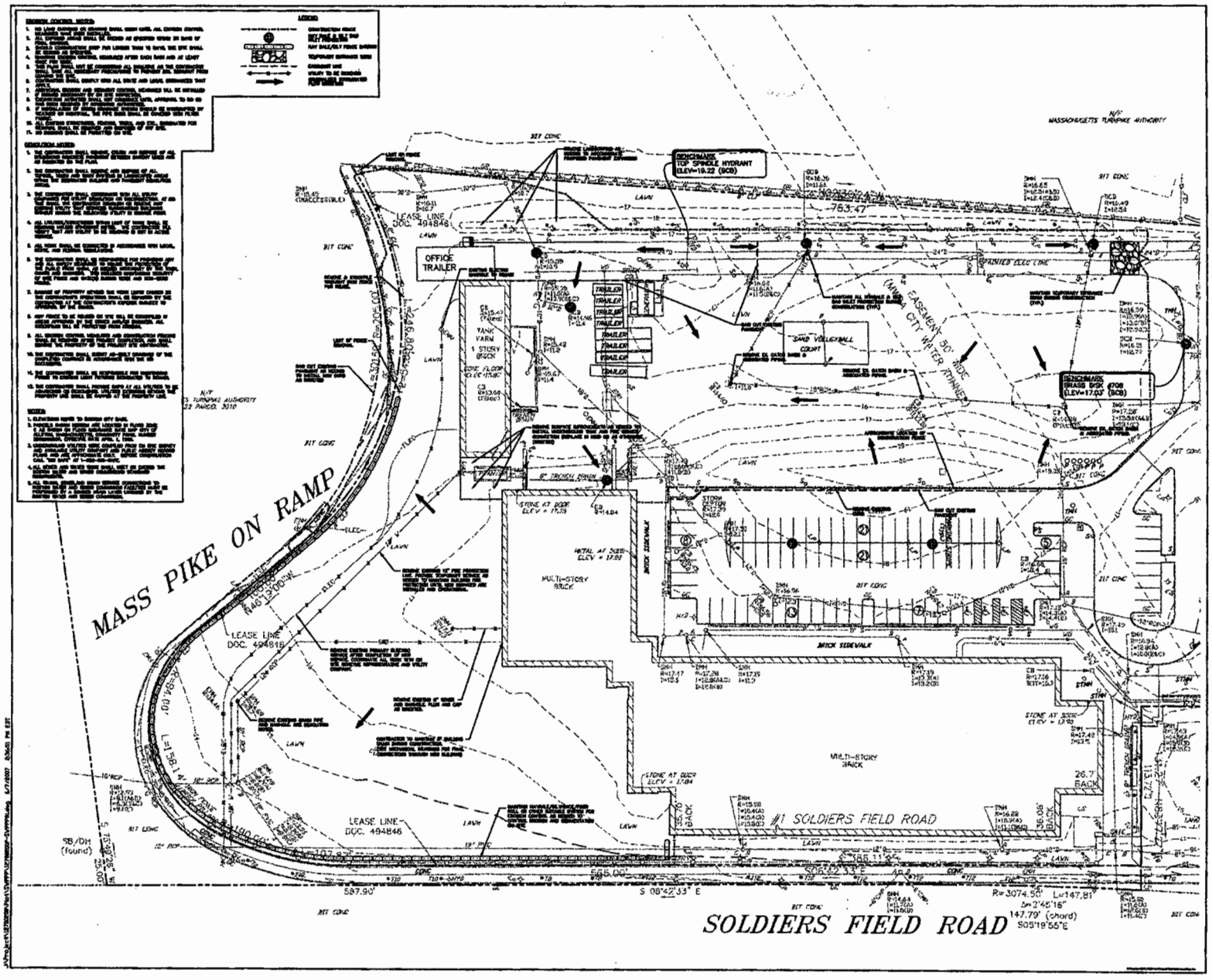
J:\Project\12700200\Graphic\Locus_Plan03.dwg 8/15/2007 11:55:43 AM EDT

Genzyme Corporation
Manufacturing Expansion, Phase II
500 Soldiers Field Road

TETRA TECH RIZZO

Locus Map

Figure
1



genzyme

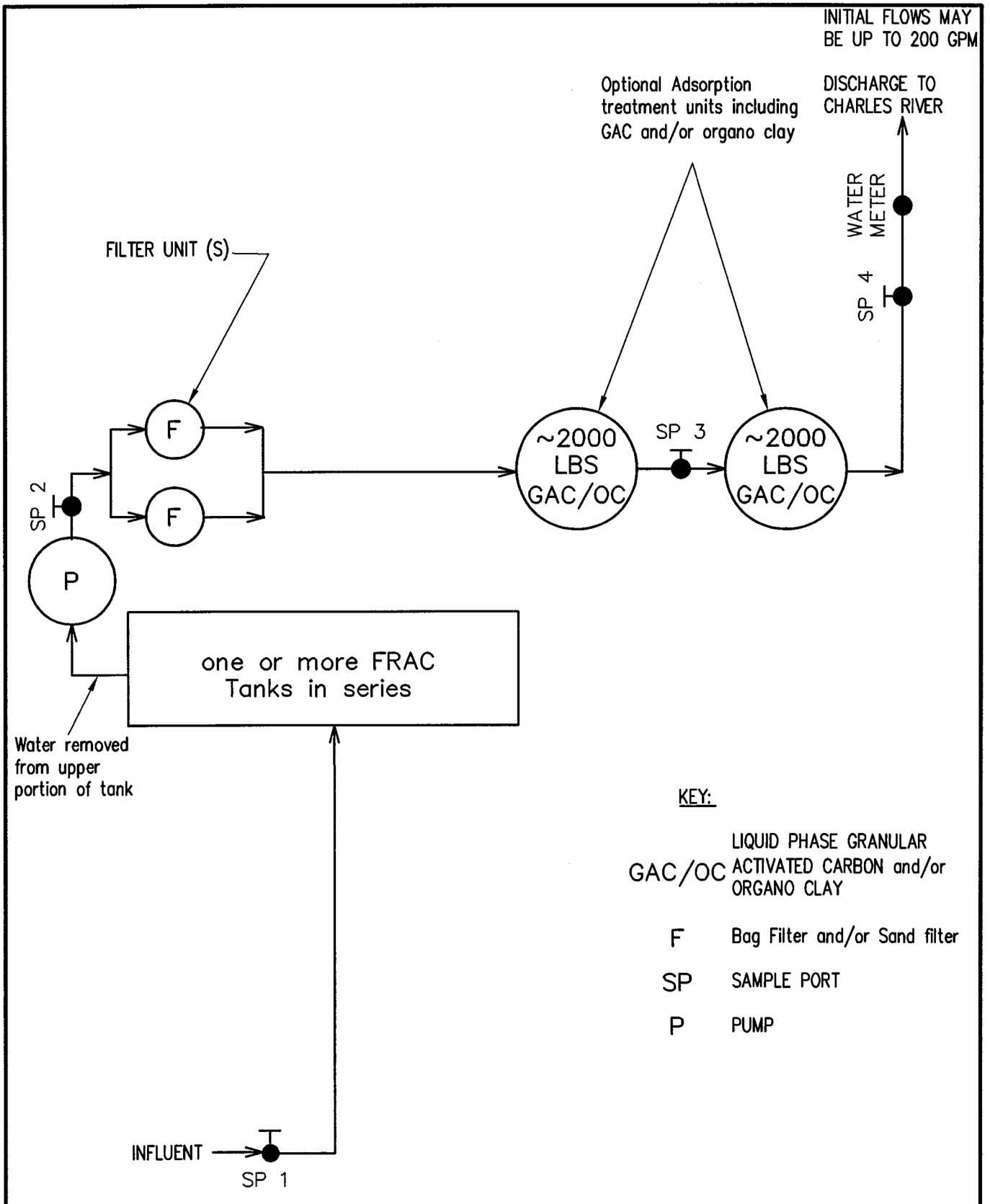
MANUFACTURING EXPANSION

CT008-05

500 Soldiers Field Road
Allston,
Massachusetts 02134

ARC

Architectural Resources Cambridge



J:Project\12700219\NPDES\Process Flow Diagram

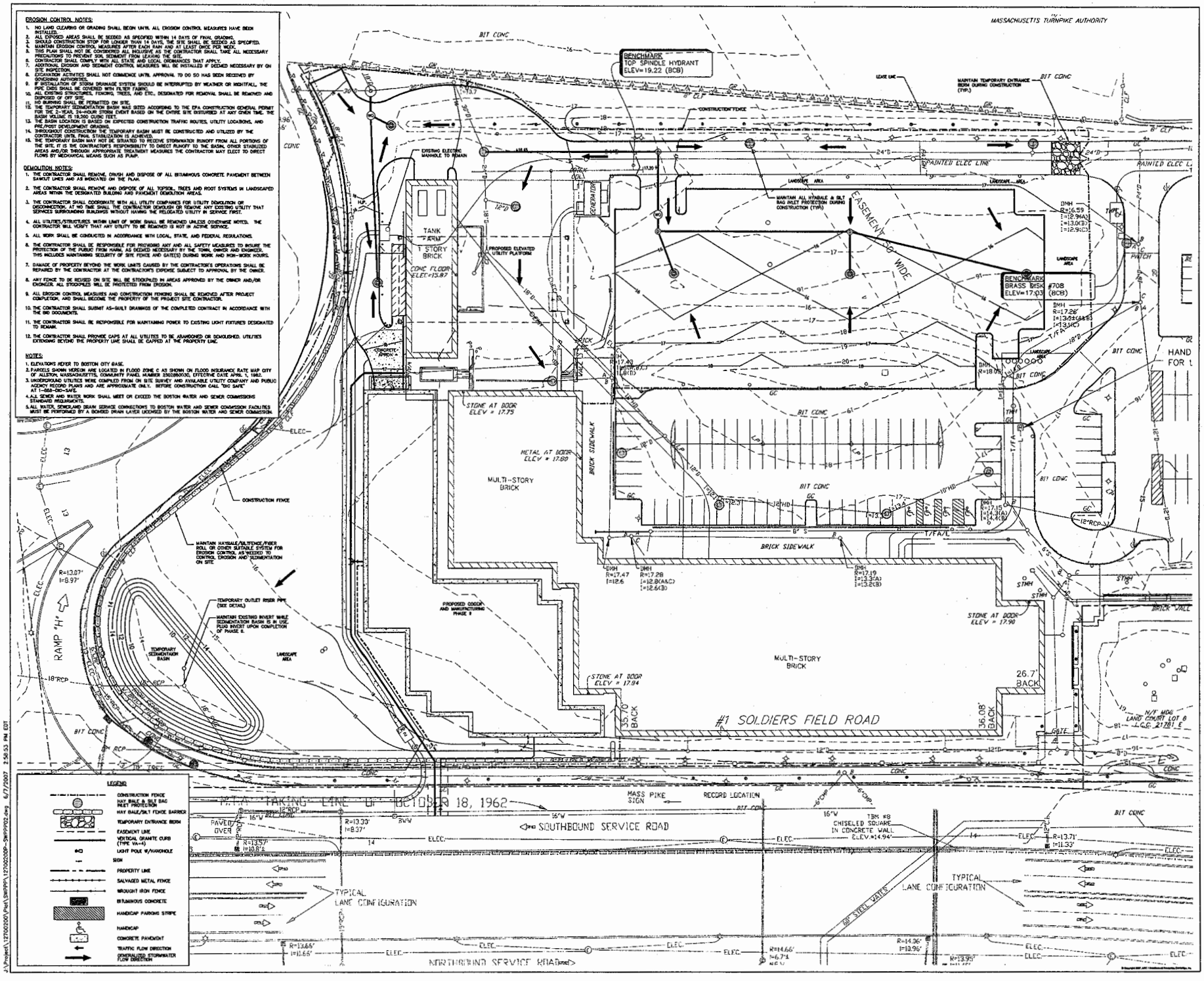
Not to Scale

Manufacturing Expansion
500 Soliders Field Road
Allston, MA

TETRA TECH RIZZO

Process Flow Diagram

Figure 3



genzyme

MANUFACTURING EXPANSION

CP008-05

500 Soldiers Field Road
Allston, Massachusetts 02134

ARC

Architectural Resources Cambridge

TETRA TECH RIZZO

Security Notice:

SCALE: 1" = 20'

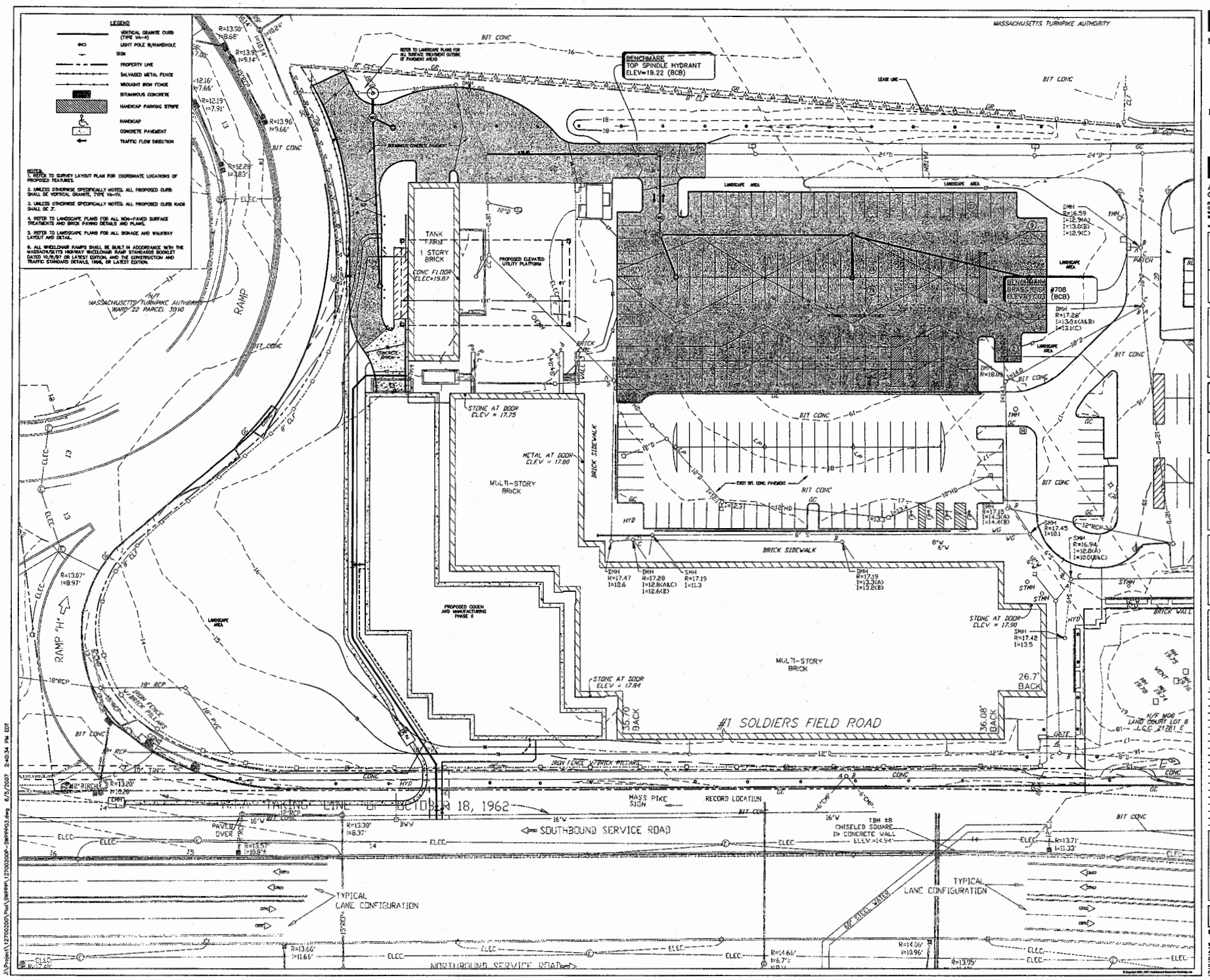
NO.	REVISION	DATE

Erosion & Sedimentation Control Plan Phase 2

C-2

SWPPP

SCALE: 1"=20'
JOB NO: 0942
DATE: 16 May 2007
DRAWN BY: BSH
FILE NAME: SWPPP-ERPHASE



genzyme

MANUFACTURING EXPANSION

CP008-05

500 Soldiers Field Road
Allston, Massachusetts 02134

ARC

Architectural Resources Cambridge

TETRA TECH RIZZO

Security Notice:

PERMIT SET

NO.	REVISION	DATE

Erosion & Sedimentation Control Plan Phase 3

C-3

SWPPP

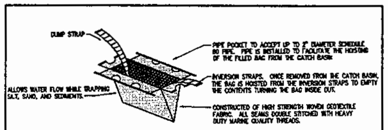
SCALE: 1"=20'
JOB NO. 3642
DATE: 16 May 2007
DRAWN BY: BW
FILE NAME: erosion_swppp.dwg

J:\Projects\127002000\Civil\SWPPP\127002000P-SWPPP03.dwg 6/5/2007 2:40:34 PM EDT

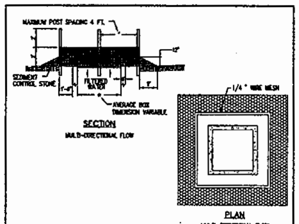
EROSION CONTROL NOTES

1. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
2. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) DURING CONSTRUCTION OPERATIONS.
3. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED.
4. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 14 DAYS OF FINAL GRADING.
5. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF A RAINFALL EXCEEDING 0.5 INCHES DURING A 24-HOUR PERIOD. ALL MAINTENANCE REQUIRED BY INSPECTION SHALL COMMENCE WITHIN 24 HOURS AND BE COMPLETED WITHIN 48 HOURS OF REPORT.
7. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
8. GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
9. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
10. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
11. GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
12. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT BASIN BEFORE IT IS 25% FULL.

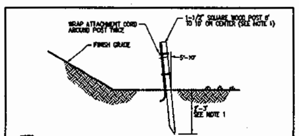
(1)



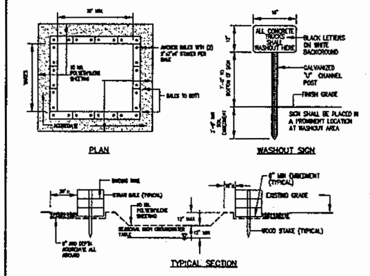
SILT BAG
N.T.S.
(2)



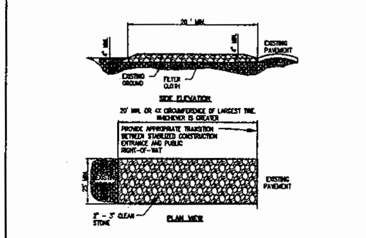
INLET PROTECTION
N.T.S.
(3)



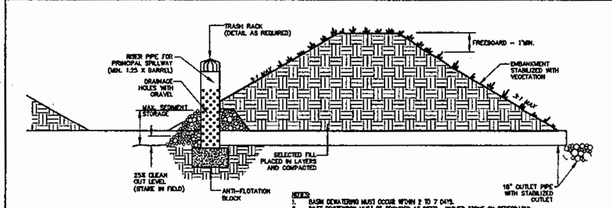
SILT FENCE BARRIER
N.T.S.
(4)



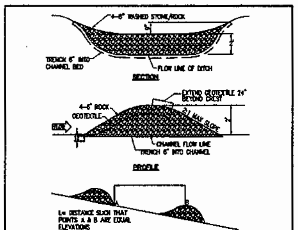
CONCRETE WASHOUT AREA
N.T.S.
(5)



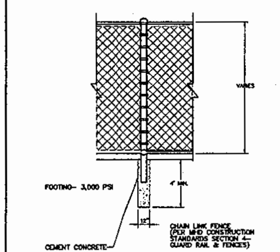
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.
(6)



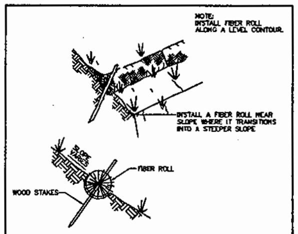
TEMPORARY RISER DETAIL – BASIN
N.T.S.
(7)



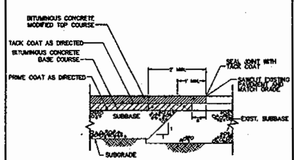
ROCK CHECK DAM DETAIL
N.T.S.
(8)



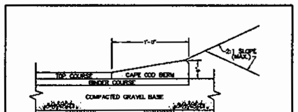
CONSTRUCTION FENCE DETAIL
N.T.S.
(9)



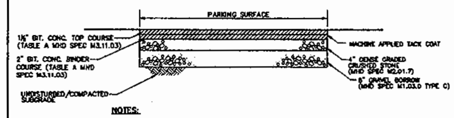
TYPICAL FIBER ROLL INSTALLATION
(10)



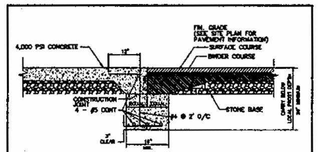
PAVEMENT MATCHING
N.T.S.
(11)



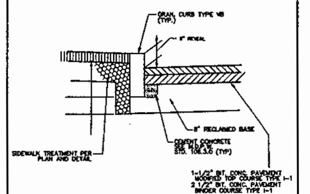
BITUMINOUS CONCRETE BERM
N.T.S.
(12)



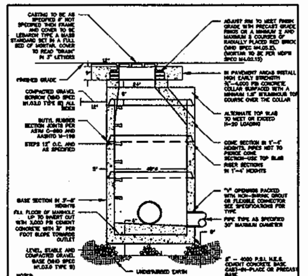
STANDARD BITUMINOUS CONCRETE PAVEMENT SECTION
N.T.S.
(13)



CONCRETE/ASPHALT JOINT DETAIL
N.T.S.
(14)



VERTICAL GRANITE CURB
N.T.S.
(15)



PRECAST CONCRETE DRAIN MANHOLE
N.T.S.
(16)

genzyme

MANUFACTURING EXPANSION

CP008-05

500 Soldiers Field Road
Allston, Massachusetts 02134

ARC

Architectural Resources Cambridge

TETRA TECH RIZZO

Security Notice:

PERMIT SET

SCALE: 1" = 20'

NO. REVISION DATE

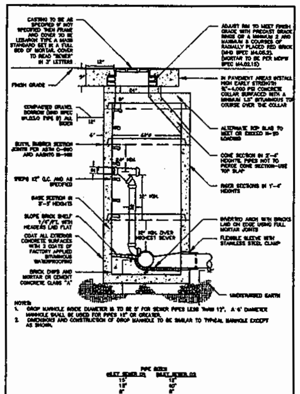
Erosion & Sedimentation Control Plan Detail

D-1

SWPPP

SCALE: N.T.S.
DATE: 16 May 2007

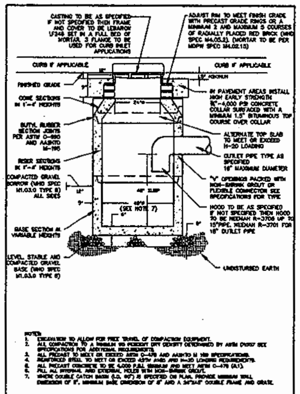
J:\Project\12700200\Plot\SWPPP\12700200P-CDT01.dwg 6/6/2007 9:35:21 AM EDT



INTERIOR DROP CONNECTION

N.T.S.

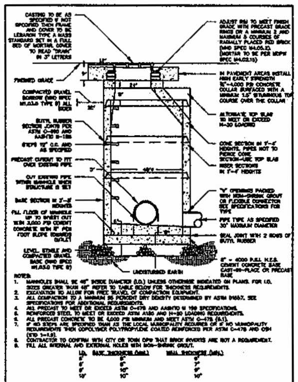
(17)



PRECAST CONCRETE CATCH BASIN

N.T.S.

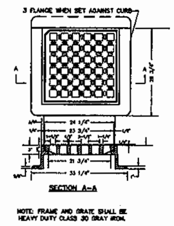
(18)



PRECAST CONCRETE DRAIN MANHOLE BUILT OVER EXISTING DRAIN LINE

N.T.S.

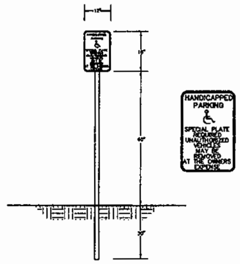
(19)



CATCH BASIN FRAME AND GRATE

N.T.S.

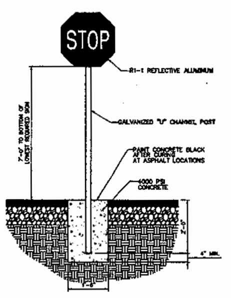
(20)



HANDICAPPED PARKING SIGN DETAIL

N.T.S.

(21)



STOP SIGN DETAIL

(22)

genzyme

MANUFACTURING EXPANSION

CP008-05

500 Soldiers Field Road
Allston, Massachusetts 02134

ARC

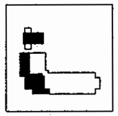
Architectural Resources Cambridge

TETRA TECH RIZZO

Security Notice:

PERMIT SET

SCALE: 1" = 20'



NO. REVISION DATE

Erosion & Sedimentation Control Plan Detail

D-2

SWPPP

SCALE: N.T.S.

DATE: 18 May 2007

J:\Project\12700200\Plot\SWPPP\12700200P-CD101.dwg 6/6/2007 9:35:21 AM EDT

Streamflow Statistics Report

Date: Thu Jun 14 2007 07:14:16
Site Location: Massachusetts
Drainage Area: 281.89 mi2
Latitude (NAD83): 42.3624 (42 21 44)
Longitude (NAD83): -71.1168 (-71 07 00)

Low Flow Basin Characteristics			
100% Statewide Low Flow (282 mi2)			
Parameter	**Value**	**Min**	**Max**
Drainage Area (square miles)	282 (above max value 149)	1.61	149
Mean Basin Slope from 250K DEM (percent)	2.33	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	0.22	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Streamflow Statistics					
Statistic	**Flow (ft^3/s)**	**Prediction Error (percent)**	**Equivalent years of record**	**90-Percent Prediction Interval**	
				Minimum	**Maximum**
D50	301				
D60	248				
D70	169				
D75	138				
D80	107				
D85	85.7				
D90	66.3				
D95	44.7				
D98	29.8				
D99	24.7				
Low-Flow Statistics					
M7D2Y	48.1				
AUGD50	91.8				
M7D10Y	23.7				

U.S. Environmental Protection Agency

Total Maximum Daily Loads

Listed Water Information

CYCLE : 2002

Click here to see metadata for this report.

Cycle: 2002 **State:** MA **List ID:** MA72-08
Waterbody Name: CHARLES RIVER
State Basin Name: CHARLES
Listed Water Map Link: MAP 303(d)

Other Impaired Water 303(d) List Information
The most current report available for this water body is 2002.
Data are also available for these years: 1998 1996

Comments:
(CHARLES BASIN) WATERTOWN DAM, WATERTOWN TO SCIENCE MUSEUM, BOSTON. MILES 9.8-1.2

State List IDs:

Cycle	State List ID
2002	MA72-08_2002

State Impairments:

State Impairment	Parent Impairment	Priority	Rank	Targeted Flag	Anticipated TMDL Submittal
CAUSE UNKNOWN	CAUSE UNKNOWN				
METALS (OTHER THAN MERCURY)	METALS (OTHER THAN MERCURY)				
NOXIOUS AQUATIC PLANTS	NOXIOUS AQUATIC PLANTS				
NUTRIENTS	NUTRIENTS				
OIL AND GREASE	OIL AND GREASE				
ORGANIC ENRICHMENT/LOW DO	OXYGEN DEPLETION				
PATHOGENS	PATHOGENS				
PRIORITY ORGANICS	OTHER TOXIC ORGANICS				
TASTE, COLOR AND ODOR	TASTE, COLOR AND ODOR				
TURBIDITY	TURBIDITY				
UNKNOWN TOXICITY	TOTAL TOXICITY				

Potential Sources of Impairment:

There were no potential sources reported to EPA by the state.

Total Maximum Daily Load (TMDL) Information:

There were no TMDLs reported to EPA by the state.

Watershed Information:

Watershed Name	Watershed States
CHARLES	MASSACHUSETTS

Inflow Estimations:

Average 50 gpm = 6.684 ft^3/min = 0.11 ft^3/sec

Max 200 gpm = 26.736 ft^3/min = 0.45 ft^3/sec

Total Flow

Average = 72,000 gal/day = 0.072 MGD

Max = 288,000 gal/day = 0.29 MGD

Calculated Dilution Factor (DF)

$DF = (Q_d + Q_s) / Q_d$

Q_d = max. flow of discharge = 0.45 ft^3/s

Q_s = 7Q10 flow for Chuler River = 23.7 ft^3/s * from Stream Stats

$DF = 24.15 / 0.45 = 53.7$ (No units)

DF = 53.7

TETRA TECH RIZZO	JOB Lenzyme - Flow Calculations
	SHEET NO. 1 OF
	CALCULATED BY ISC DATE 6/14/07
	CHECKED BY DATE
	SCALE NS

Quantity (lbs/day) = Q (MGD) × concentration (mg/L) × 8.34

Mass (Kg/day) = Quantity lbs/day / 2.2 Kg/lb

TSS - Result: BRL - RL = 10 mg/L assume = 5 mg/L since above RGP ML

Max

0.29 MGD · 5 mg/L · 8.34 = 12.1 lbs/day = 5.5 Kg/day

Ave.

0.072 MGD · 5 mg/L · 8.34 = 3.0 lbs/day = 1.4 Kg/day

TRC - Result - BRL - RL = 0.2 mg/L ML = 0.02 mg/L assume TRC = 0.1 mg/L

Max

0.29 MGD · 0.1 mg/L · 8.34 = 0.2 lbs/day = 0.1 Kg/day

Ave

0.072 MGD · 0.1 mg/L · 8.34 = 0.06 lbs/day = 0.03 Kg/day

Acenaphthene - Result 1.2 ug/L = 0.0012 mg/L - Ave = Same

Max

0.29 MGD · 0.0012 mg/L · 8.34 = 0.003 lbs/day = 0.001 Kg/day

Ave. Same

0.072 MGD · 0.0012 · 8.34 = 7.2×10^{-4} lbs/day = 3.3×10^{-4} Kg/day

Iron Result 2.0 mg/L

Max

0.29 MGD × 2.0 mg/L · 8.34 = 4.8 lbs/day = 2.2 Kg/day

TETRA TECH RIZZO

JOB Benzyme - Chemical Compound Quantities

SHEET NO. 2 OF

CALCULATED BY IK DATE 6/11/07

CHECKED BY DATE

SCALE NTS

Iron (cont.)

Ave.

0.072 MGD · 2.0 mg/L · 8.34 = 1.2 lbs/day = 0.5 Kg/day

Naphthalene: Result 1/4 1.9 ug/L = 0.0019 mg/L Ave = 0.55 ug/L

Max

0.29 MGD · 0.0019 mg/L · 8.34 = 0.005 lbs/day = 0.002 Kg/day

Ave

0.072 MGD · 0.00055 mg/L · 8.34 = 3.3×10^{-4} lbs/day = 1.5×10^{-4} Kg/day

Barium Result (diss.) Max = 500 ug/L = 0.5 mg/L Ave = 260 ug/L = 0.26

Max

0.29 MGD · 0.5 mg/L · 8.34 = 1.2 lbs/day = 0.5 Kg/day

Ave.

0.072 MGD · 0.266 mg/L · 8.34 = 0.2 lbs/day = 0.07 Kg/day

TETRA TECH RIZZO

JOB Genzyme - Chemical Corporal Restrictions

SHEET NO. 3 OF

CALCULATED BY ISC DATE 6/14/07

CHECKED BY DATE

SCALE