

SOLID WASTE

COUNTY POLK

CITY OF DES MOINES

FACILITY
NAME SLUDGE STORAGE

NUMBER 77-SDP-26-87P

F() 5

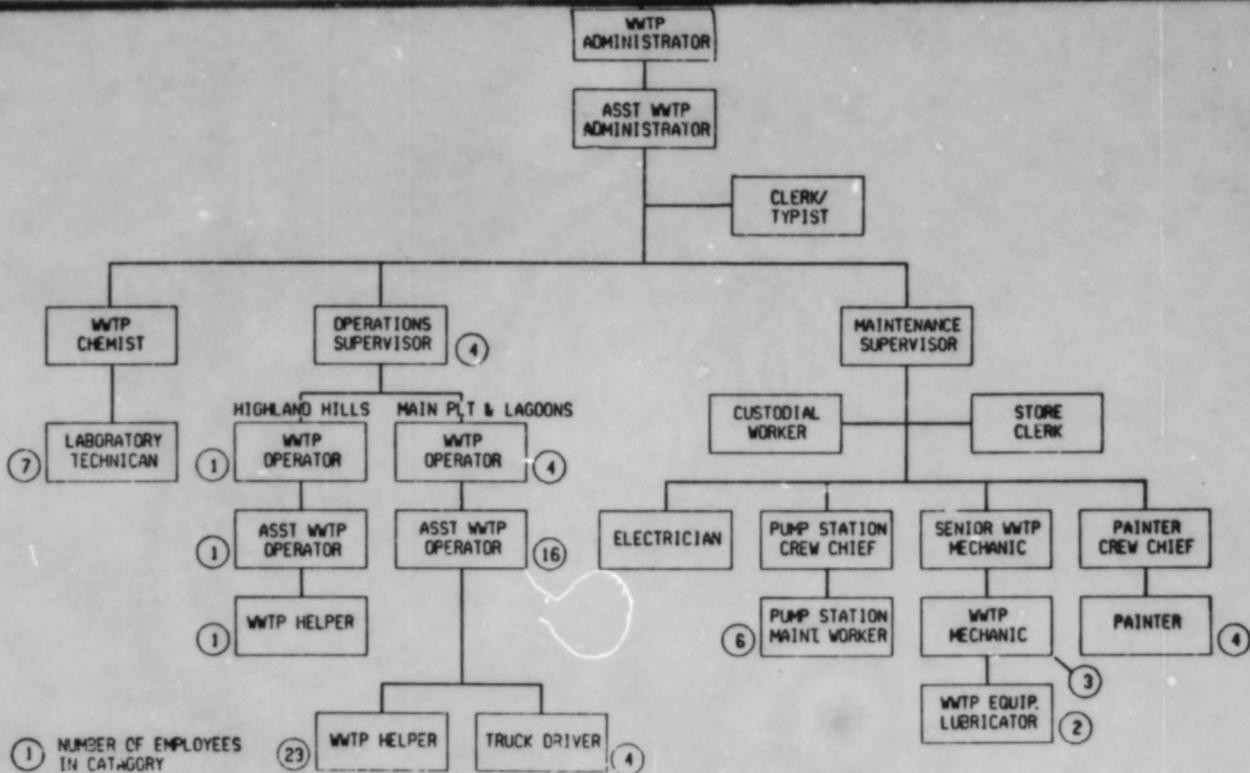


FIGURE II-4
ORGANIZATION CHART
WASTEWATER TREATMENT PLANT
DES MOINES ICA FACILITIES PLAN

B. The City will provide to the sewage sludge storage facility a minimum of 2000 tons of sewage sludge (25% solids) during the months of June, July and/or August and 2000 tons of sewage sludge (25% solids) during the months of December, January, February and/or March.

C. The Owner agrees to accept a minimum total of 1500 dry weight tons of sewage sludge (or approximately 6000 tons at 25% solids) during each calendar year to be applied upon land owned or controlled by the Owner.

D. The Owner agrees to allow the City to access and use the sewage sludge storage facility for storage of sewage sludge to be applied to land owned by another party in the event the Owner does not make available the necessary land for the application of 1500 dry weight tons of sewage sludge (or approximately 6000 tons at 25% solids) in a calendar year.

E. The Owner agrees to allow the City access to the sewage sludge storage site and to use the above stated land for storage of sewage sludge for the duration of the agreement.

F. The City is responsible for maintaining and monitoring the sewage sludge storage facility for leachate, runoff and vector control.

G. The City shall defend and hold harmless the Owner and all its representatives against any consequences to third parties as a result of the storage of sewage sludge at such location.

H. Ownership of the sludge storage facility shall be in the City and remain with the City until such time as the same is removed by the City.

I. The City will provide such maintenance to the

SANITARY DISPOSAL PROJECT PERMIT
IOWA DEPARTMENT OF NATURAL RESOURCES

- I. Permit Number: 77-SDP-26-87P
- II. Permitted Agency: City of Des Moines
- III. Project Location: See description in storage agreement
- IV. Responsible Official:

Name: Steve Modrick
Address: Des Moines ICA Regional Wastewater Treatment Plant
3001 Vandalia Road
Des Moines, IA 50317
Phone: 515/263-3003

- V. Registered Design Engineer:

Name: Harold Smith
City Engineer
Address: East First and Locust
Des Moines, IA 50307
Phone: 515/283-4931
Registration Number: 5039

- VI. Date Issued: October 26, 1987
- VII. Date Expires: October 26, 1990
- VIII. Issued by: Paul A. Lundy, P.E.
Environmental Protection Division

for: The Director

- IX. General Provisions:

The above-named permitted agency is hereby authorized to operate a sludge storage facility at the described location in conformance with Chapter 455B of the Code, the rules pursuant thereto existing at the time of issuance, and any subsequent new rules which may be duly adopted and any provisions contained in Section X of this permit.

The project shall be operated according to the engineering plans and specifications approved by the Department of Natural Resources and these shall become a part of this permit. Any modifications or deviations from the engineering plans and specifications must have prior approval by the Department and an amendment to this permit issued.

The issuance of this permit in no way relieves the applicant of the responsibility for complying with all other local, state, and federal statutes, ordinances, and rules or other requirements applicable to the establishment and operation of this sludge storage facility.

September 24, 1987

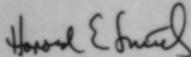
Mr. Stuart C. Schmitz
Iowa Department of Natural Resources
Des Moines, IA 50319

RE: Off Site Sludge Storage Facility

This letter is written in response to your comment letter of September 17, 1987. A copy of the proposed agreement between the land owner and the City is enclosed. This agreement includes a legal description of the storage site. A copy of the signed agreement will be submitted when it is executed.

Also, enclosed is an outline of how rules 102.13 and 104.10 will be complied with. Should you have any questions feel free to contact Roger Schletzbaum at 283-4598.

Very truly yours,



Harold E. Smith, P.E.
City Engineer

HES/RS/dzi

Enclosure



ENGINEERING DEPARTMENT
CITY HALL
EAST FIRST AND LOCUST
DES MOINES, IOWA 50307
(515) 283-4991

ALL-AMERICA CITY 1949, 1976, 1981

RECEIVED

SEP 28 1987

IOWA DEPARTMENT OF
NATURAL RESOURCES

567-104.8(455B) Sludge processing.

104.8(1) If introduced to solid waste, sludges shall be introduced after any resource recovery operation.

104.8(2) Sludge addition equipment and storage facilities shall be sanitary and odor free.

567-104.9(455B) Storage containers and facilities.

104.9(1) Storage of solid waste.

a. Containers used for the storage of all solid wastes except salvaged materials but including refuse derived fuels shall be covered, leakproof, durable and of easily cleanable construction.

b. Facilities used for the storage of all solid wastes except municipal sewage sludge and salvaged materials but including refuse derived fuels shall be constructed as follows:

(1) Storage facilities shall have a smooth, impervious, easily cleaned base.

(2) Storage facilities shall provide leachate collection.

(3) Storage facilities shall prevent runoff entering the facility from adjacent areas.

(4) Storage facilities, except for compost storage facilities, shall be enclosed to prevent blowing litter and roofed to prevent precipitation into any solid waste.

c. Facilities used for the storage of municipal sewage sludge shall be constructed as follows:

(1) Storage facilities shall have a smooth, impervious, easily cleaned base.

(2) Storage facilities shall provide leachate monitoring and collection. The executive director may accept contingency plans in lieu of an installed collection system. *Sludge collection*

(3) Storage facilities shall prevent runoff entering the facility from adjacent areas.

(4) Storage facilities shall be designed and constructed to prevent odor, litter, leaching and vector problems. The acceptability of any such facility shall be based on the materials being stored, duration of storage and conditions to be experienced.

104.9(2) Storage of salvaged materials. Containers and facilities used for the storage of salvaged materials shall be designed and constructed to prevent odor, litter, leaching and vector problems. The acceptability of any such container shall be based on the materials being stored, duration of storage and conditions to be experienced.

Address operating requirements in plans

567-104.10(455B) Operating requirements for all processing facilities. All sanitary disposal projects with processing facilities shall be operated in conformance with chapter 102 and this subrule. The plan submitted shall detail how the facility will comply with these requirements.

104.10(1) All equipment shall be cleaned daily unless the department approves less frequent cleaning on a specific schedule stipulating component part, cleaning method, and schedule.

104.10(2) Sewage sludge shall not be handled in such a manner as to present a health hazard or potential source of pollution.

104.10(3) All solid waste processed or rejected by the facility shall be disposed in conformance with these rules.

104.10(4) Sites with storage containers or facilities for composted materials shall be monitored for leachates and records shall be maintained of leachate generation, precipitation and storage duration.

104.10(5) Emergency access shall be provided to the material in solid waste storage facilities.

104.10(6) Composted material shall be identified by markers in the storage area.

104.10(7) Storage time.

a. Solid waste. Solid waste, except for composted materials, but including refuse derived fuels shall not be stored on the site for more than seventy-two (72) hours.

b. Composted material. Composted materials shall not be stored on the site for more than sixty (60) days.

would be a variance to this rule?

Applied when available.



TERRY E. BRANSTAD, GOVERNOR

RECORD COPY

File Name CITY OF DES MOINES SLUDGE

Senders Initials 77-SDP-36-87P

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

December 9, 1987

John P. Bellizzi, P.E.
Public Works Director
City of Des Moines
216 SE 5th Street
Des Moines, IA 50307

SUBJECT: Municipal Sludge Treated with Cement Kiln Dust.

Dear Mr. Bellizzi:

The purpose of this letter is to discuss the current state regulations as they would apply to municipal sewage sludge treated with cement kiln dust. By definition, cement kiln dust treated sludge would be classified as "stabilized sewage sludge". As a result, the treated sludge would be regulated by Department rules found in Chapters 120 and 121.

In order for the treated sludge to be land applied without a permit from the state, the requirements of rule 121.3 (1) must be met. Several requirements that I wish to point out are found in rule 121.3 (1)c(11). This rule states,

"If sludge is applied to land subject to use by the general public (e.g., golf courses, parks), public access to the sludge application site shall be restricted for a period of two (2) months after sludge application. In no case shall sludge be applied to areas where direct body contact with the soil is likely (e.g., school yards, playground areas, picnic areas)."

In other words, cement kiln dust treated sludge would have limited application on city-owned public areas, and could not be applied to areas where direct body contact with the soil is likely.

In summary, the land application of cement kiln dust treated sludge would be regulated by the requirements of Chapter 120 and 121 of the Department's rules. Any deviation from these requirements would require changes in the Department's existing rules. The Department does not plan to proceed with rule revisions at the present time. As mentioned in our meeting on December 7, 1987, the marketing of cement kiln dust treated sludge would be regulated by the Department of Agriculture and Land Stewardship, and therefore questions in regard to marketing this material for sale should be directed that Department.

Sincerely,

PETER R. HAMLIN, CHIEF
AIR POLLUTION & SOLID WASTE PROTECTION BUREAU

PRH:SS:ap/m343ap.1

OPERATING REQUIREMENTS FOR ALL SANITARY DISPOSAL PROJECTS
AND PROCESSING FACILITIES

- 102.13(1) Open burning will not take place at this facility.
- 102.13(2) The sludge is a 30-40 percent dewatered "cake" and therefore no litter will be present.
- 102.13(3) This facility is located on private property with access provided to the City through an agreement with the land owner, therefore, public access is not provided.
- 102.13(4) The sludge is stabilized dewatered material that will be land applied. Therefore flies, insects, rodents, etc., will be controlled.
- 102.13(5) The equipment designated under chapter 102.12(7) will be available to haul and dispose of the sludge on an as-needed basis.
- 102.13(6) The access road is an existing agricultural access road and will be maintained for access when sludge hauling and land application is in process.
- 102.13(7) The site is on private property and not open to the public.
- 104.10(1) Equipment will be cleaned daily.
- 104.10(2) The stabilized sludge will be handled only with mechanical equipment and therefore health hazards and pollution potentials will be minimized.
- 104.10(3) All sludge stored in the facility will be land applied.
- 104.10(4) The sludge is stored on an asphalt slab with runoff being stored on the slab and collected in the sump. The water will then be hauled to the treatment plant and treated. Records of hauling and land application will be kept.
- 104.10(5) Emergency access is available by way of the haul road and through the farmer's entrance.
- 104.10(6) The sludge is all generated at the same point and not composted.

access road as is necessary to maintain access for sludge hauling vehicles, provided however that such requirement shall not include any requirement to provide permanent surfacing.

J. The Owner agrees to keep mowed that portion of the easement located outside the storage site security fence.

K. At the expiration of the term of the easement the City shall remove the storage facility and restore the site as far as reasonably possible to its original pre-construction condition.

L. The times and conditions for land application of such sewage sludge, as opposed to storage shall be governed by separate agreement between these parties.

7. Easement Runs With Land. This Easement shall be deemed to run with the land and shall be binding on Grantor and on Grantor's successors and assigns.

8. Approval by City Council. This Easement shall not be binding until it has received the final approval and acceptance by the Des Moines City Council by Resolution which approval and acceptance shall be noted on this Easement by the City Clerk.

9. Owner does HEREBY COVENANT with the City that Owner holds said real estate described in this Easement by title in fee simple; that Owner has good and lawful authority to convey the same; and said Owner covenants to WARRANT AND DEFEND the said premises against the lawful claims of all persons whomsoever.

10. The names and addresses of the parties for the purpose of delivery of notices are:

Owner:

Wilbur E. Goodhue, Inc.
905 Circle Drive
Carlisle, IA 50047

City of Des Moines:

Cy Carney
City Manager, City Hall
E 1st and Locust
Des Moines, IA 50307

No legal or financial responsibility arising from the construction or operation of the approved project shall attach to the State of Iowa or the Department of Natural Resources due to the issuance of this permit.

If title to this project is transferred, the new owner must apply to the Department for a transfer of this permit within thirty days of the date of title transfer. This permit is void sixty days after the date of title transfer unless the Department has transferred the permit.

NOTE: Failure to comply with Chapter 455B of the Code, or any rule or order promulgated pursuant thereto, or any or all provisions of this permit may result in 1) a civil penalty of up to \$500 for each day of violation, pursuant to Section 455B.307 of the Code, or 2) the suspension or revocation of this permit, pursuant to Section 455B.304 of the Code.

X. Special Provisions:

1. Only stabilized dewatered municipal sludge from the Des Moines ICA Regional Wastewater Treatment Plant shall be deposited in this sludge storage facility.
2. During periods when this facility is being used for sludge storage, the outer embankments shall be inspected for detection of leachate outbreak at least once per week. No monitoring wells shall be required at the date of permit issuance. However, if monitoring wells are determined to be necessary in the future by this Department, they must be installed at that time.



TERRY E. BRANSTAD, GOVERNOR

RECORD COPY

File Name _____

Senders Initials _____

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

September 17, 1987

Steve Modrick
Des Moines Wastewater Treatment Plant
3001 Vandalia Road
Des Moines, IA 50317

SUBJECT: City of Des Moines Sludge Storage Project

Dear Mr. Modrick:

This letter is written in response to the plans submitted regarding the sludge storage area on the Goodhue Farm. There is additional information that must be submitted to the Department to be included in the plans. Please address the following questions in the revised plans.

1. Please submit a legal description of the site as required by rule 102.12(2).
2. Please submit a proof of entitlement to use the site as required by rule 102.12(9).
3. The plans must be revised to detail the means by which the operating requirements of rule 102.13 shall be complied with.
4. The plans must also be revised to detail the means by which the operating requirements of rule 104.10 shall be complied with.

Revised plans must be prepared in triplicate by a registered engineer addressing the above comments. If you have any questions about what is required, please contact me at 281-8986.

Sincerely,

STUART C. SCHMITZ
ENVIRONMENTAL ENGINEER
SOLID WASTE SECTION

SCS:ap

cc: Field Office 5

104.10(8) Solid waste shall be unloaded at the operating areas only when an operator is on duty at that area. Solid waste may be deposited in storage containers inside the site under the supervision of an attendant or operator.

104.10(9) The operating area for solid waste shall be as small as practicable and shall be surrounded with appropriate barriers to prevent litter from blowing beyond the operating area.

104.10(10) The site shall be fenced to control access and a gate shall be provided at the entrance to the site and kept locked when an attendant or operator is not on duty.

104.10(11) A copy of the permit, engineering plans and reports shall be kept at the site at all times.

104.10(12) Sites not open to the public shall have a permanent sign posted at the site entrance specifying:

- a. Name of operation.
- b. The site permit number.
- c. That the site is not open to the public.
- d. The name and telephone number of the responsible official.

This rule is intended to implement Iowa Code section 455B.304.

[Filed 9/1/71, amended 2/13/74, 6/2/75]

[Filed 2/25/77, Notice 9/22/76—published 3/23/77, effective 4/27/77]

[Filed 5/25/78, Notice 2/22/78—published 6/14/78, effective 7/19/78]

[Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]

[Filed 8/24/84, Notice 5/9/84—published 9/12/84, effective 10/18/84]*

[Filed emergency 11/14/86—published 12/3/86, effective 12/3/86]

*If site fenced,
how is access
controlled*

City of Des Moines Sludge Storage
77-SDP-26-87P

Polk Co.

Plans + Specs.

SCS

PLANS AND SPECIFICATIONS
APPURTENANT TO
PERMIT FOR SANITARY DISPOSAL PROJECT
NO. 77-SDP-26-87P
DATED October 26, 1987

IOWA DEPARTMENT OF
NATURAL RESOURCES
ENVIRONMENTAL PROTECTION
DIVISION

By Paul M. Lundy, P.E.

- 104.10(7) The sludge will be applied when the agricultural land is available including spring and fall when crops are not growing.
- 104.10(8) The sludge hauling, unloading, loading and application equipment will be operated by the City.
- 104.10(9) The area is minimized by the concrete barriers and asphalt.
- 104.10(10) The facility is located on private property. Public access is not allowed. The access road is cabled and locked to prohibit access.
- 104.10(11) A copy of the permit will be kept at the Wastewater Treatment Plant.
- 104.10(12) A sign will be posted at the haul road entrance and farm entrance.

Signed this 19th day of October, 1987.

Approved as to form:

OWNER

Neil Johnson
City Solicitor
Infrastructure & Services

By Wilbert T. Goodhue Inc
Title: Lucile T. Goodhue
President

Attest:

CITY OF DES MOINES, IOWA

Donna V. Boetel-Baker
Donna V. Boetel-Baker
City Clerk

By John P. Dorrian
John P. Dorrian
Mayor

I, Donna V. Boetel-Baker, City Clerk of the City of Des Moines, Iowa, do hereby certify that the within and foregoing Easement was duly approved and accepted by the City Council of said City of Des Moines by Resolution and Roll Call No. 87-4398, passed on the 19th day of October, 1987, and this certificate is made pursuant to authority contained in said Resolution.

Signed this 20th day of October, 1987.

Donna V. Boetel-Baker
Donna V. Boetel-Baker
City Clerk of the City of Des Moines, Iowa

STATE OF IOWA)
) ss:
COUNTY OF POLK)

On this 15th day of October, A.D. 1987, before me, the undersigned, a Notary Public in and for said State, personally appeared Lucile T. Goodhue and _____ to me personally known, who, being by me duly sworn, did say that they are the President and _____, respectively, of said corporation; that (no seal has been procured by the said) (the seal affixed thereto is the seal of said) corporation; that said instrument was signed and sealed on behalf of said corporation by authority of its Board of Directors; and that the President and _____ as such officers acknowledged the execution of said instrument to be the voluntary act and deed of said corporation, by it and by them vountarily executed.

Elaine M. Anderson
Notary Public in and for
Polk County, Iowa

Permit # 77-SDP-076-87 P
 Facility Name City of DSM Sludge Storage

Reviewer Schmitz

Facility Type SLF RECYCLE OTHER
 LAP TRANSFER
 Type of Action NEW RENEWAL AMENDMENT

COMPLETENESS REVIEW CHECKLIST

Request Out	Apply	Not Apply	Completed (In)	Item
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>3/10/87</u>	Three Copies Received (APP/PLANS/SPECS)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>10/6/87</u>	Detailed Enough to Construct
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9/17/87</u>	Departmental Rules (CHECKLIST)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9/17/87</u>	Comment Letter To Applicant/Design Engr
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>10/20/87</u>	Any Addnl Env. Degradation (Exist. Probs)
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Coord w/State Archaeologist
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Coord w/Geol Survey Bureau (Borings Submitted)
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Coord w/Soil Cons. Service
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>9/10/87</u>	Plans Certified
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		File Review
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Amendment Update (Asbestos Provision)
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Sufficient Groundwater Mon. Plan/Operation
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		SWA (Special Monitoring)
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Field Office Insp/Approval
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Legal Office Approval (Pending Order)
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		High Rate Rules
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Additional Requirements for Low rate
	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Lifetime Metals, Yearly Cd, pH

City of Des Moines Sludge Storage.

a sanitary disposal project is revoked by the director, no new permit shall be issued to that agency for that disposal project for a period of one year from the date of revocation. This rule shall not prohibit the issuance of a permit for the disposal project to another public or private agency.

This rule is intended to implement Iowa Code section 455B.305.

567—102.11(455B) Inspection prior to start-up. The department shall be notified when the initial construction of a sanitary disposal project has been completed, in order that an inspection may be made to determine that the project is constructed as designed. No solid waste shall be accepted by a sanitary disposal project until that project has been inspected and approved by the department.

567—102.12(455B) Primary plan requirements for all sanitary disposal projects. Every application for any permit issued by the department shall include the following. In addition, every application shall include the particular information required by the chapter describing the type of project to be constructed.

102.12(1) The name, address and telephone number of:

- Owner of site where project will be located.
- Permit applicant.
- Official responsible for operation of project.
- Design engineer.
- Agency to be served by the project, if any.
- Responsible official of agency served, if any.

Need legal desc.

102.12(2) A legal description of the site.

102.12(3) A map or aerial photograph locating the boundaries of the site and identifying:

- North or other principal compass points.
- Zoning and land use within one-half mile.
- Haul routes to and from the site with load limits or other restrictions.
- Homes and buildings within one-half mile.
- Section lines or other legal boundaries.
- Any nearby runway used or planned to be used by turbojet or piston-type aircraft at FAA certificated airports.

102.12(4) Type, source, and expected volume or weight of waste to be handled per day, week or year.

102.12(5) An organizational chart.

102.12(6) A detailed description of the disposal process to be used.

102.12(7) A table listing the equipment to be used, its design capacities and expected loads.

102.12(8) A contingency plan detailing specific procedures to be followed in case of equipment breakdown, maintenance downtime, or fire in equipment or vehicles, including method to be used to remove or dispose of accumulated waste.

Proof of entitlement

102.12(9) Proof of the applicant's ownership of the site or legal entitlement to use the site for the disposal of solid waste for the term of the permit for which application is made.

102.12(10) Such other information as may be required by the director.

This rule is intended to implement Iowa Code section 455B.305.

Address operating requirements of 102.13

567—102.13(455B) Operating requirements for all sanitary disposal projects. Every application for any permit issued by the department shall detail the means by which the following operating requirements shall be complied with. All sanitary disposal projects shall be operated in conformance with these requirements.

PRIMARY PLAN REQUIREMENTS

Chapter 102.12(1)

- a. OWNER OF SITE: Goodhue Farms, Inc.
Russ Davitt
6320 SE 60th Street
Carlisle, IA 50047
- b. PERMIT APPLICANT: City of Des Moines
- c. OFFICIAL RESPONSIBLE FOR OPERATION: Steve Modrick
3001 Vandalia Road
Des Moines, Iowa 50317
Tel: 515/263-3003
- d. DESIGN ENGINEER: City of Des Moines Engineering Department
- e. AGENCY SERVED: Des Moines ICA Regional Wastewater Treatment Plant
- f. RESPONSIBLE OFFICIAL OF AGENCY SERVED: Harold Smith

Chapter 102.12(2)

LEGAL DESCRIPTION OF SITE: See Attached.

Chapter 102.12(3) MAP OF SITE: See Plan Sheets for North Arrow (a), Haul

Routes (c), Homes within $\frac{1}{2}$ mile (d) and Section Lines (e).

(b) Zoning and land use: Permanent open space as per ICA Facility Plan.

(c) FAA Certified Airports: None.

Chapter 102.12(4) Type, source and expected weight of waste to be handled
per year: 2,000 tons.

Chapter 102.12(5) ORGANIZATIONAL CHART: See Attached.

EASEMENT AND SLUDGE STORAGE AGREEMENT

This Agreement, made as of this 19th day of October, 1987 by and between the City of Des Moines, Iowa, hereinafter referred to as "City" and Wilbur E. Goodhue, Incorporated, hereinafter referred to as "Owner" witnesseth that:

WHEREAS, the City operates a Wastewater Treatment Plant which, after processing, produces a product known as sewage sludge; and

WHEREAS, the City and the Owner are parties to a contemporaneous agreement for the application of such sludge to the land of the Owner; and

WHEREAS, it is in the mutual interest of the City and the Owner to provide by this Agreement for the storage of sludge upon the land belonging to Owner hereinafter described and to provide by this Agreement for access to such storage site; and

WHEREAS, such Easement shall be in consideration of the mutuality of benefit to be derived from such arrangement; NOW, THEREFORE,

Owner and City mutually agree as follows:

1. The term of this Agreement shall be for a period of six years commencing the date of this Agreement above indicated and ending at the expiration of six (6) years thereafter. The parties hereto may renew this Agreement in writing.

2. Upon final approval and acceptance of this Easement by the City Council of the City of Des Moines, Iowa Owner does hereby convey unto the City of Des Moines, Iowa (City) an easement for the term of this Agreement to be used solely as site for the construction of a sewage sludge storage facility, for the construction of such facility, for access thereto and for removal of such facility at the expiration of such term.

3. Such Construction Easement shall be over, under, through and across the following described real estate:

RECEIVED

OCT 20 1987

IOWA DEPARTMENT OF
NATURAL RESOURCES

Date: October 20, 1987

To: Record

From: Stu Schmitz

RE: City of Des Moines Sludge Storage
New Permit 77-SDP-26-87P

Permits - file
77-SDP-26-87P Polk Co.
RECORD COPY
File Name City of Des Moines Sludge Storage
Senders Initials SCS

I have reviewed the plans and specifications for the City of Des Moines Sludge Storage Facility and recommend that a permit be issued.

The sludge will be stored on a 5-inch asphalt base to be constructed adjacent to the land where the sludge will be land applied. The perimeter of the storage facility will be a concrete barrier supported by an earthen dike. At one end of the storage area will be installed a sump to collect any runoff from the sludge. This runoff will be returned to the treatment plant. The plans for the storage facility meet the requirements in Chapter 102 and 104 for storage facilities. Leachate problems are not anticipated because of the proposed impermeable asphalt base and the collection sump. At any rate, the storage facility is required to be inspected weekly for any leachate in special provision 2 of the permit.

City of DSM Sludge Storage
 Engineer Steve Schmitz

77-SDP-26-87P

NEW [] RENEWAL [] AMENDMENT

9/10/87 Plans Received

Initial Review & Draft

SOS ^{10/21/87} Engineer

JS ^{10/21/87} Senior Engineer

MA Chief

Final Draft

____ Engineer

____ Senior Engineer

____ Chief

	Memo	Cover Letter	Permit	Plan & Spec
Applicant		Original	Original	X
R.O. # 5	X	X	X	X
Records	Original	X	X	X
<u>Steve Schmitz</u>	X	X	X	
<u>Harold Smith</u>		X	X	
<u>address on permit</u>				

102.13(1) Open burning shall be prohibited except when permitted by chapter 23 of these rules. Any burning to be conducted at the site shall be at a location and separate and distinct from the operating area.

102.13(2) Litter shall be confined to the property on which the sanitary disposal project is located. At the conclusion of each day of operation, any litter strewn beyond the confines of the operating area shall be collected and stored in covered leakproof containers or properly disposed.

102.13(3) Scavenging shall be prohibited. Any salvaging to be conducted must be described in the permit application and all salvaged materials must be stored and removed from the sanitary disposal project site in conformance with the permit conditions.

102.13(4) Effective means shall be taken to control flies, other insects, rodents and other vermin.

102.13(5) Equipment designated in the plans and specifications or equivalent equipment shall be used to operate the site at all times.

102.13(6) The major internal roads shall be of all weather construction and maintained in good condition. Dust shall be controlled on internal roads.

102.13(7) Sites open to the public shall have a permanent sign posted at the site entrance specifying:

a. Name of the operation.

b. The site permit number.

c. The hours and days the site is open to the public.

d. The categories of waste which will be accepted for disposal or, as an alternative, identifies the categories of waste which are prohibited.

e. Telephone number of official responsible for the operation.

This rule is intended to implement Iowa Code section 455B.304.

67—102.14(455B) Disposal of special wastes.

102.14(1) *Radioactive waste.* Radioactive materials shall not be disposed of by a sanitary disposal project. Lustrous time pieces are exempt.

102.14(2) *Industrial sludge and toxic and hazardous waste.* No industrial sludge or toxic and hazardous waste shall be delivered to nor disposed by a sanitary disposal project unless explicit instructions are first obtained from the department.

a. For procedure see rule 100.3(2).

b. Prior to the issuance of any such instructions, the department may require that a proposal for disposal of such waste in conformance with these rules, with supporting data as may be deemed necessary, be submitted by the originator of such waste for evaluation by the department. The prohibition of such waste shall continue in effect until an acceptable procedure for processing or disposal has been developed and approved.

c. All toxic or hazardous waste or industrial sludge for which instructions have been received shall be disposed according to those instructions.

102.14(3) *Sewage sludge.*

a. Unstabilized sewage sludge, including unstabilized septic tank pumpings, shall not be disposed in the portion of a sanitary landfill open to the public. Sewage sludge, whether stabilized or unstabilized, may be disposed of at a sanitary landfill as provided in chapter 103 or 121.

b. Stabilized and unstabilized sewage sludge may be handled at processing facilities as provided in chapter 104.

c. Stabilized and unstabilized sewage sludge may be disposed of by land application in accordance with chapter 121.

[Filed 2/25/77, Notice 9/22/76—published 3/23/77, effective 4/27/77]

[Filed 5/25/78, Notice 2/22/78—published 6/14/78, effective 7/19/78]

[Filed emergency 8/31/78 after Notice 4/19/78—published 9/20/78, effective 8/31/78]

[Filed 9/28/79, Notice 5/30/79—published 10/17/79, effective 11/21/79]

[Filed 4/23/81, Notice 2/18/81—published 5/13/81, effective 6/17/81]

[Filed emergency 6/3/83—published 6/22/83, effective 7/1/83]

[Filed 8/24/84, Notice 5/9/84—published 9/12/84, effective 10/18/84]

[Filed emergency 11/14/86—published 12/3/86, effective 12/3/86]

Chapter 102.12(6) DETAILED DESCRIPTION OF THE DISPOSAL PROCESS: Digested dewatered primary and secondary sludge will be hauled to the storage facility and applied to agricultural land at a rate of 2 tons per acre per day in spring and fall when crops have been removed.

<u>Chapter 102.12(7)</u> EQUIPMENT:	<u>Equipment</u>	<u>Capacity</u>
	3 tandum trucks	10 yards
	1 end loader	1/3 yard
	1 end loader	2 yards
	2 manure spreaders	8 yards
	2 tractors	

Chapter 102.12(8) CONTINGENCY PLAN: This facility is backed up by sludge drying beds at the treatment plant site.

Chapter 102.12(9) PROOF OF ENTITLEMENT TO USE THE SITE: See Attached.

Chapter 102.12(10) OTHER INFORMATION: None.

Storage Facility

A rectangular parcel in the Northeast 1/4 of the Southwest 1/4 of Section 27; Township 78 North; Range 23 West of the 5th P.M.; Commencing at the Southwest corner of the Northeast 1/4 of the Southwest 1/4 of said Section 27; Thence East 200.0 feet along the South line of the Northeast 1/4 of the Southwest 1/4 of said Section 27; Thence North 300.0 feet; thence West 200.0 feet; Thence South 300.0 feet along the West line of the Northeast 1/4 of the Southwest 1/4 of said Section 27 to the point of beginning; all now included in and forming a part of the City of Carlisle, Polk County, Iowa, depicted approximately on the attached plat.

4. Upon final approval and acceptance of this easement by the City Council of the City of Des Moines, Iowa Owner does hereby convey unto the City of Des Moines, Iowa (City) an easement for the term of this agreement to be used solely as access to the site for the construction of a sewage sludge storage facility for the construction of such facility and for removal of such facility at the expiration of such term.

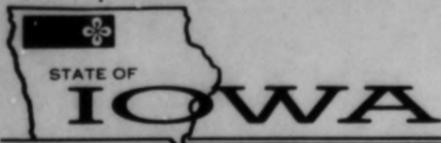
5. That such access easement shall be over, through and across the following described real estate:

Access Road

The existing agricultural access from South East 52nd Avenue to the Southwest corner of the Northeast 1/4 of the Southwest 1/4 of Section 27; Township 78 North; Range 23 West of the 5th P.M.; all now included in and forming a part of the City of Carlisle, Polk County, Iowa, depicted approximately on the attached plat.

6. Such easement shall be subject to the following terms and conditions:

A. The City agrees to finance and develop a storage facility at the site specified in the plans dated September 10, 1987, Drawing Number 290-85 & 85. Said plans meet with all requirements specified by Iowa Department of Natural Resources. The City will be responsible for filing and obtaining required permits for sludge storage.



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

October 26, 1987

Steve Modrick
Des Moines ICA Regional Wastewater Treatment Plant
3001 Vandalia Road
Des Moines, IA 50317

SUBJECT: City of Des Moines Sludge Storage Facility
New Permit 77-SDP-26-87P

Dear Mr. Modrick:

Enclosed is the permit and the approved plan additions for the City of Des Moines Sludge Storage Facility. The permit and the approved plans must be kept at the sanitary disposal project in accordance with solid waste rule 104.10(11), I.A.C. Please review the permit and plans with your operator, as they must become familiar with them.

Special provision 2 requires the sludge storage facility to be inspected weekly for the detection of any leachate outbreak.

If you have any questions regarding this permit, please contact Stu Schmitz at 515/281-8986.

Sincerely,

PETER R. HAMLIN
SUPERVISOR
SOLID WASTE SECTION

PRH:lb/PH-1.LSB

Enclosure

cc: Field Office 5
Stu Schmitz, Staff Engineer
Harold Smith, City Engineer, Des Moines, IA



TERRY E. BRANSTAD, GOVERNOR

City of Des Moines Sludge Storage
77-SDP-26-87P
Polk Co. Permit file
SCS

RECORD COPY

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

Senders Initials _____

October 14, 1987

Steve Modrick
Des Moines Wastewater Treatment Plant
3001 Vandalia Road
Des Moines, IA 50317

RE: City of Des Moines Sludge Storage Project

Dear Mr. Modrick:

The Department has reviewed the additional information regarding the sludge storage area. The submitted plans and specifications contain all the information required by the Department's rules except for the signed proof of entitlement to use the site. When the signed copy of the legal agreement is sent to the Department, the permit for the sludge storage facility may be issued. Please submit the signed legal agreement when it becomes available.

Sincerely,

STUART C. SCHMITZ
ENVIRONMENTAL ENGINEER
SOLID WASTE SECTION

SCS/mjt/M286MJT.18

cc: Field Office 5
Harold E. Smith, P.E., City Engineer, East First and Locust
Des Moines, IA 50307

CHAPTER 104
SANITARY DISPOSAL PROJECTS WITH PROCESSING FACILITIES

(Prior to 7/1/83, DSQ Ch 29)
(Prior to 12/3/86, Water, Air and Waste Management (900))

567—104.1(455B) Scope and applicability. Any sanitary disposal project utilizing any of the equipment described in this chapter shall comply with the requirements for that equipment set out in this chapter, in addition to the requirements of chapter 102.

104.1(1) Detailed engineering drawings of the sanitary disposal project shall be submitted showing all conveyor lines, holding areas, loading and unloading areas, transfer points, and initial and permanent roads, buildings and equipment to be installed, unloading and holding areas, fences and gates, landscaping and screening devices, personnel and maintenance facilities, sewer and water lines, lines of flow for all waste and salvaged materials.

104.1(2) Design specifications for all equipment shall be as follows:

a. All equipment which may be cleaned by washing shall be installed on reasonably smooth impermeable floors so designed as to be easily cleaned and having drainage to a sanitary sewer unless other acceptable provisions are made to control process or wash water.

b. All equipment shall be so designed as to prevent spilling of waste and to be easily cleaned and shall be adequately enclosed so as to prevent blowing of dust or litter or wetting of the waste from precipitation or runoff.

567—104.2(455B) Dumping or holding floors or pits.

104.2(1) All unloading area surfaces shall be constructed of impervious, reasonably smooth material so designed as to be easily cleaned, with drainage to a sanitary sewer.

104.2(2) All unloading areas shall have a storage capacity of at least one day's processing capacity.

104.2(3) All unloading areas shall be adequately enclosed and roofed so as to prevent blowing of dust or litter and to prevent precipitation or drainage onto any accumulated waste.

567—104.3(455B) Compaction equipment. All compactors shall be located on reasonably smooth impermeable aprons so designed as to control wash water and area runoff, be easily cleaned, and avoid creation of fly or rodent habitats.

567—104.4(455B) Hammermills.

104.4(1) All hammermills shall be equipped with adjustable water spray or other dust suppression equipment.

104.4(2) All hammermills shall be provided with fire and explosion control or suppression devices or equipment.

104.4(3) Solid waste which cannot be processed by the hammermill or is rejected by it shall be stored in enclosed leakproof containers.

567—104.5(455B) Hydro-pulping or slurring equipment. All solid waste which cannot be processed by such equipment or is rejected by it shall be stored in enclosed leakproof containers.

567—104.6(455B) Air classifiers. All air classifiers shall be equipped with dust suppression equipment unless air is recirculated.

567—104.7(455B) Metals separation equipment.

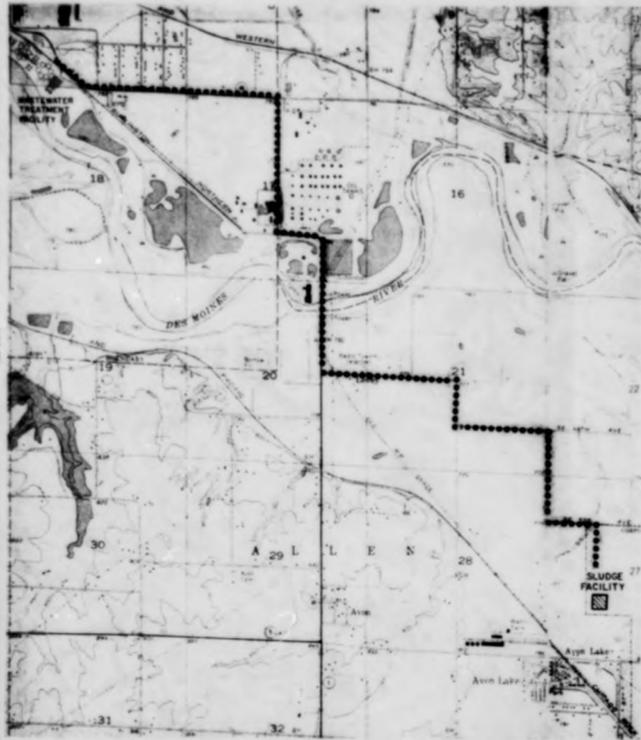
104.7(1) Metals separation equipment shall be installed at that point in the process which minimizes possible organic contamination of the metal.

104.7(2) Provisions shall be made for storage of separated materials in enclosed leakproof containers.

DES MOINES - SLUDGE STORAGE

77-SDP-26-87P FO-5

10F2



VICINITY MAP

HAUL ROUTE.....

GENERAL NOTES:

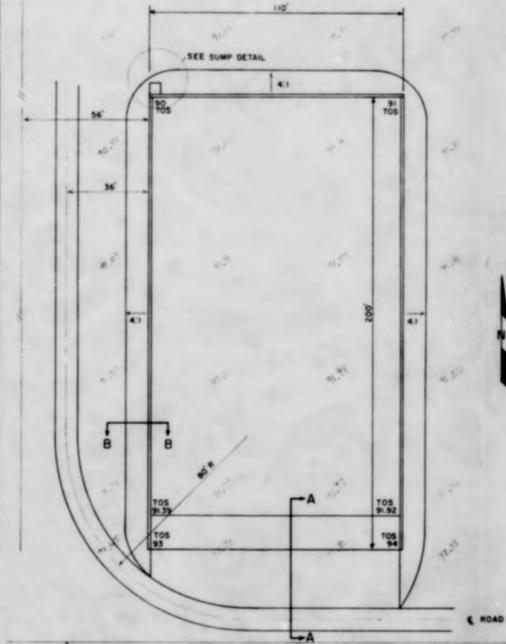
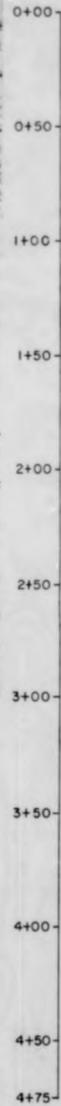
Details shown hereon are for construction of a typical concrete barrier.

Details shown are typical. Alternate design details may be submitted to the engineer for approval.

Epoxy coated steel bars are required, see Section 4151.02b of specifications.

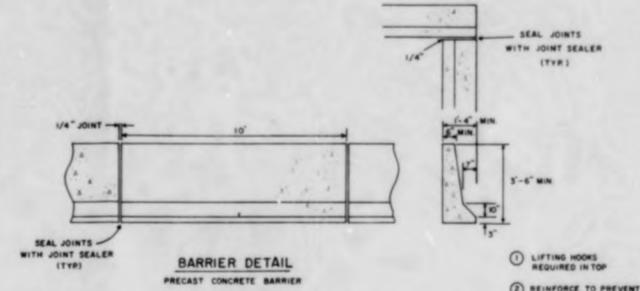
Price bid per lineal foot for "Barrier, Concrete Half Section C" Top".

1. Lifting hooks required in top.
2. Reinforce to prevent cracking when lifted.
3. All exposed corners are to be filletted with a 1" dressed and beveled strip.
4. 2" x 4" nominal slots.



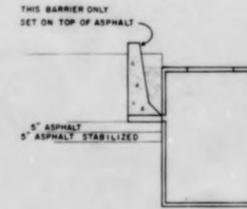
TOE OF LEVEE

SECTION A

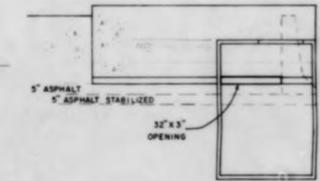


BARRIER DETAIL
PRECAST CONCRETE BARRIER

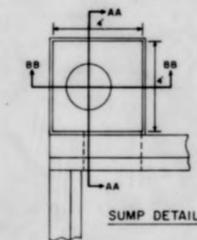
- ① LIFTING HOOKS REQUIRED IN TOP
- ② REINFORCE TO PREVENT CRACKING WHEN LIFTED



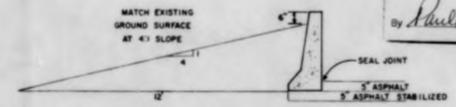
SECTION AA



SECTION BB



SUMP DETAIL



SECTION B

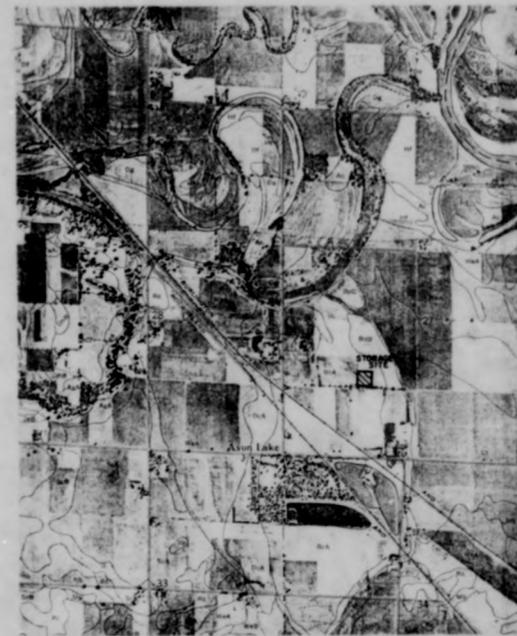
PLANS AND SPECIFICATIONS
APPLICANT TO
PERMIT FOR SECTION DES MOINES PROJECT
NO. 77-SDP-26-87P
DATED October 26, 1987

IOWA DEPARTMENT OF
NATURAL RESOURCES
ENVIRONMENTAL PROTECTION
DIVISION

By *Paul L. Lundy, P.E.*

- ① MATCH EXISTING ROAD GRADE
- ② ROCK OR STABILIZE EXISTING ROAD

Man	Date
DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING CITY OF DES MOINES, IOWA	
Project: ICA SLUDGE FACILITY	
Location:	
Designed by	Drawn by
Checked by	Scale
Job No. W-8292	Date 8-25-87
Drawn 0214-87-011	Date 8-25-87
I hereby certify that this work was prepared by me or under my direct personal supervision and that I am a duly registered Professional Engineer under the laws of the State of Iowa.	
APPROVED:	Date
City Engineer, Reg. # E.C.	Date 9-10-87
Chief Civil Engineer, Reg. # E.C.	Date
SHEET 1 OF 2 FILE NO 290-84	



SOIL MAP

NAME OF OPERATION: DES MOINES ICA REGIONAL WASTEWATER TREATMENT PLANT OFFSITE SLUDGE STORAGE FACILITY	
SITE PERMIT NUMBER: 88-222-22	
CLOSED TO THE PUBLIC AUTHORIZED PERSONNEL ONLY	
RESPONSIBLE AGENCY: WASTEWATER TREATMENT DIVISION PUBLIC WORKS DEPARTMENT CITY OF DES MOINES, IOWA	
PHONE NUMBER: 285-3003	

PROJECT ENTRANCE SIGN
(NOT TO SCALE)

NOTE: PROJECT ENTRANCE SIGN TO BE PLACED AT GATE ENTRANCE TO THE PROPERTY AT S.E. 52nd AVE.

Mark	Date	By
DEPARTMENT OF PUBLIC WORKS BUREAU OF ENGINEERING CITY OF DES MOINES, IOWA		
Project: ICA SLUDGE FACILITY		
Location:		
Designed By	Checked By	Scale 1" = 5'
Drawn By	Project No. W-8292	Date 8-28-87
Order 0214-87-011	Date 8-28-87	
I hereby certify that this plan was prepared by me or under my direct personal supervision and that I am a duly registered Professional Engineer under the laws of the State of Iowa.		
APPROVED:		
City Engineer, Reg. P.E.	Date	
<i>Handwritten Signature</i>	9/10/87	
Chief Civil Engineer, Reg. P.E.	Date	
SHEET 2 OF 2 FILE NO. 290-85		